Chinese Society of Comparative Pathology

中華民國比較病理學會

第 74 次比較病理學研討會

淋巴造血系統疾病專題

(Diseases of Hematopoietic and Lymphoid System)

主辦單位

Chinese Society of Comparative Pathology

中華民國比較病理學會

國立臺灣大學獸醫專業學院

December 9, 2018 (中華民國 107 年 12 月 9 日)

SCHEDULE
74th MEETING OF COMPARATIVE PATHOLOGY
中華民國比較病理學會 第 74 次比較病理學研討會
淋巴造血系統疾病專題

時間：107 年 12 月 9 日(星期日)
地點：**國立台灣大學獸醫專業學院獸醫三館 B01 室**
地址：台北市羅斯福路四段一號
電話：0963750228

Time (時間)	Schedule (議程)		Moderator (主持)
08:30~09:20	Registration (報到)		
09:20~09:30	Opening Ceremony (致詞) 許永祥 理事長/ 鄭謙仁 院長		
09:30~10:30	專題演講	專題演講: 臺中榮民總醫院 韓紹民 醫師 題目：The Application Mutlicolor Flow Cytometric Immunophenotyping in Hematologic Malignancies – An Overview of Euroflow System	張惠雯 秘書長
10:30-11:00	Coffee Break (拍團體照)		
11:00~11:25	Case 511	Shih, Chia-Wen (施洽雯), M.D., M.S.[1], Lee , Hsin-Yu (李欣毓), M.D.[2] [1]Department of Pathology, Lotung Poh-Ai Hospital (羅東博愛醫院病理科) [2]Department of Nephrology, Lotung Poh-Ai Hospital (羅東博愛醫院腎臟內科)	張惠雯 秘書長
11:25~11:50	Case 512	Chia-Shuen Lin (林佳萱)[1], Yung-Hsiang Hsu (許永祥)[2] [1]School of Medicine, Tzu Chi University, Hualien, Taiwan, (慈濟大學醫學系) [2]Department of Pathology, Buddhist Tzu Chi General Hospital and Tzu Chi University, Hualien, Taiwan (花蓮慈濟醫院暨慈濟大學 病理科)	張惠雯 秘書長
11:50~13:10	Lunch （餐廳） Board Meeting (理監事會議)		
13:10~13:35	Case 513	Hsueh, Cheng-Shun (薛丞舜), DVM[1]; Tsai, Chyong-Ying (蔡瓊英), DVM, MS[2]; Fun In Wang (王汎熒), DVM, PhD[1]; Jeng, Chian-Ren (鄭謙仁), DVM, PhD[1]; Chang, Hui-Wen (張惠雯), DVM, PhD[1]; Pang, Victor Fei (龐飛), DVM, PhD[1]; Liu, Chen-Hsuan (劉振軒), DVM, PhD[1] [1]Graduate Institute of Molecular and Comparative Pathobiology, School of Veterinary Medicine, National Taiwan University (國立台灣大學獸醫專業學院分子暨比較病理生物學研究所) [2]National Taiwan University Veterinary Hospital, College of Bioresources and Agriculture, National Taiwan University (國立台灣大學生物資源暨農學院附設動物醫院)	朱旆億 理事
13:35~14:00	Case 514	Cheng, Ming-Fang (鄭明芳), M.D., Ph. D.[1, 2]; Yan, Jing-Heng (顏敬恆), M.D.[3]; Peng, Yi-Jen (彭奕仁), M.D., Ph. D.[2]	朱旆億 理事

		[1] Division of Histology and Clinical Pathology, Hualian Armed Forces General Hospital, Hualien, Taiwan (國軍花蓮總醫院組織臨床病理科) [2] Deparment of Pathology, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan (國防醫學院三軍總醫院病理部) [3]Division of Urology, Tri-Service General Hospital Songshan Branch, National Defense Medical Center, Taipei, Taiwan (國防醫學院三軍總醫院松山分院泌尿外科)	
14:00~14:25	Case 515	Lo, Chieh (羅婕), DVM, MS[1,2]; Wei-Cheng Yang (楊瑋誠), DVM, PhD[3], Li, Wen-Ta (李文達), DVM, PhD[1,2]* [1]Graduate Institute of Molecular and Comparative Pathobiology, School of Veterinary Medicine, National Taiwan University (國立台灣大學獸醫專業學院分子暨比較病理生物學研究所) [2]Taiwan Cetacean Society (中華鯨豚協會) [3]School of Veterinary Medicine, National Taiwan University (國立台灣大學獸醫專業學院)	朱旆億 理事
14:25~14:50	Coffee Break		
14:50~15:15	Case 516	Pei-Yi Chu (朱旆億), MD PhD[1]; Chun-Jui Wei (魏君叡), MD[1*] [1]Department of Pathology, Show Chwan Memorial Hospital, Changhua, Taiwan (彰化秀傳醫院病理科)	劉振軒 常務理事
15:15~15:40	Case 517	Tsai, Fang-Yi (蔡芳宜), DVM, MS[1]; Chang, Jung-Chin (張榕津), DVM[2]; Kao, Ju-Pai (高如栢), DVM, MS[3]; Liao, Jiunn-Wang (廖俊旺), DVM, PhD[1,4]. [1] Animal Disease Diagnostic Center, National Chung Hsing University (國立中興大學動物疾病診斷中心) [2] Department of Veterinary Medicine, National Chung Hsing University (國立中興大學獸醫系) [3] National Chung Hsing University Veterinary Medicine Teaching Hospital (國立中興大學獸醫教學醫院) [4]Graduate Institute of Veterinary Pathobiology, National Chung Hsing University (國立中興大學獸醫病理生物學研究所)	劉振軒 常務理事
15:40-16:05	Case 518	Cheng, Chia-Chun (鄭家鈞)[1]; Hsu Yung-Hsiang (許永祥)[1], MD. [1]Department of Pathology, Buddhist Tzu-Chi General Hospital & University (佛教慈濟醫院暨慈濟大學病理科)	劉振軒 常務理事

16:05-16:30	Case 519	Chia-Lin Ho (何佳霖) DVM, MS[1]；Yu- Cheng Cheng (鄭羽呈)[2]；Jui-Hung Shien (沈瑞鴻) DVM, PhD[3]；Shan-Chia Ou (歐繕嘉) DVM, PhD[4]；Jiunn-Wang Liao (廖俊旺) DVM, PhD[1] [1]Animal Disease Diagnostic Center, National Chung Hsing University (國立中興大學動物疾病診斷中心) [2]Department of Veterinary Medicine, NCHU (國立中興大學獸醫學系) [3]Graduate of Veterinary Medicine, NCHU (國立中興大學獸醫學研究所) [4]Graduate Institute of Microbiology and Public Health, NCHU (國立中興大學微生物暨公共衛生學研究所)	劉振軒 常務理事
16:30-16:55	Case 520	Peng, Yi-Jen (彭奕仁), M.D., Ph. D.[1#] , Cheng, Ming-Fang (鄭明芳), M.D., Ph. D.[2,] [1] Deparment of Pathology, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan (國防醫學院三軍總醫院病理部) [2]Division of Histology and Clinical Pathology, Hualian Armed Forces General Hospital, Hualien, Taiwan (國軍花蓮總醫院組織臨床病理科)	劉振軒 常務理事
16:40-16:50	**General Discussion (綜合討論) 許永祥 理事長**		

地圖

目　錄

Special Lecture

(專題演講)

題目：The Application Mutlicolor Flow Cytometric Immunophenotyping in Hematologic Malignancies – An Overview of Euroflow System

韓紹民醫師

臺中榮民總醫院血液腫瘤科

Abstract

The central roles of immunophenotyping in Hematologic diseases are identification, numeration, and characterization. For identification, immunophenotyping is crucial for leukemia and lymphoma classification. For numeration, immunophenotyping can represent the degree of disease infiltration at diagnosis, and treatment of response during follow-up. As for characterization, the immunophenotyping characters of pathologic cells have impact on patient's prognosis, and further into therap. The Euroflow Consortium integrated the central roles, and published antibodies panels in 2012. Those are 8-color-based panels, and contains 4 screen tubes for target population identification, and 2 tubes for plasma cell characterization, 7 tubes for myeloid series characterization, 4 tubes for precursor B-cell leukemia (BCP-ALL) characterization, 4 tubes for precursor T-cell characterization, 5 tubes for B-cell chronic lymphoproliferative disease (CLPD) characterization, 5 tubes for T-cell CLPD characterization, 3 tubes for Nature killer cell-CLPD characterization, 2 tubes for BCP-ALL minimal residual disease (MRD) detection, and 2 tubes for multiple myeloma MRD detection. The performance of Euroflow panels have high accuracy for diagnosis, and high sensitivity for MRD detection. It is optimal for hematologic disease screening, prognosis predication, and treatment follow-up.

MEETING OF COMPARATIVE PATHOLOGY
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中華民國比較病理學會第 74 次比較病理學研討會
CASE DIAGNOSIS
74 cp slide website
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Case No.	Presenter	Slide No.	Diagnosis
Case 511	Shih, Chia-Wen (施洽雯)	LP-9691	Crystal storing histiocytosis associated with multiple myeloma. http://www.ivp.nchu.edu.tw/slide_view.php?id=1576
Case 512	Lin, Chia-Shuen (林佳萱)	17-15255	Myeloid sarcoma http://www.ivp.nchu.edu.tw/slide_view.php?id=1582
Case 513	Hsueh, Cheng-Shun (薛丞舜)	NTU2017-3243	Neurolymphomatosis (neurotropic lymphoma), B cell, right musculocutaneous nerve http://www.ivp.nchu.edu.tw/slide_view.php?id=1505
Case 514	Cheng, Ming-Fang (鄭明芳)	35910B	Primary diffuse large B-cell lymphoma (activated B-cell type) of right testis, Stage IE at least http://www.ivp.nchu.edu.tw/slide_view.php?id=1572
Case 515	Li, Wen-Ta (李文達)	IL20160116I	Thymoma, most likely, mediastinal mass http://www.ivp.nchu.edu.tw/slide_view.php?id=1575
Case 516	Chu, Pei-Yi (朱旆億)	S18-8694E	Extranodal marginal zone lymphoma of mucosa-associated lymphoid tissue (MALT lymphoma) http://www.ivp.nchu.edu.tw/slide_view.php?id=1577
Case 517	Tsai, Fang-Yi (蔡芳宜)	CO18-423	Angioliposarcoma in a Cockatiel http://www.ivp.nchu.edu.tw/slide_view.php?id=1573
Case 518	Cheng, Chia-Chun (鄭家鈞)	18-7751	Idiopathic multicentric Castleman disease with abundant IgG4-positive cells http://www.ivp.nchu.edu.tw/slide_view.php?id=1583
Case 519	Ho, Chia-Lin (何佳霖)	CP17-1013	Chicken infectious anemia in chicken http://www.ivp.nchu.edu.tw/slide_view.php?id=1574
Case 520	Peng, Yi-Jen (彭奕仁)	1004714	Intravascular diffuse large B cell lymphoma. http://www.ivp.nchu.edu.tw/slide_view.php?id=1584

Case Number: 511
Slide Number: LP-9691

Shih, Chia-Wen (施洽雯), M.D., M.S.[1], Lee , Hsin-Yu (李欣毓), M.D.[2]

1. Department of Pathology, Lotung Poh-Ai Hospital (羅東博愛醫院病理科)
2. Department of Nephrology, Lotung Poh-Ai Hospital (羅東博愛醫院腎臟內科)

CASE HISTORY:

Signalment: 89-year-old female. .

Clinical History:
A 89-year old female was sent to our ER with the problem of fever up to 39.2 ℃ noted since this morning with weakness and abdominal discomfort. Then the patient was admitted to MICU for the sake of low BP (70/40mmHg) despite intravenous fluid hydration. For a long past history of renal disease, the patient was transferred to nephrology word for further management. Antibiotics was used, then fever subside with stable BP. Abdominal CT was performed and showed splenomegaly with diffuse multiple heterogenous poorly enhanced nodules with the largest one measuring 3.2 cm in diameter. The patient also has past history of HCVD, arrhythmia, CKD and ESRD for more than 5 years. For the CBC showed pancytopenia, oncologist was consulted and bone marrow biopsy was performed. The specimen was sent to the Department of Pathology for pathologic diagnosis. Macroscopically, the specimen submitted consisted of a small tissue measuring 2.0 x 0.2 x 0.2 cm with grayish-brown color and hard consistency.

Clinical Pathology:
BUN: 41 mg/dL (6-20 mg/dL), Creatinine: 6.7 mg/dL (0.6-1.1 mg/dL), Glucose: 96 mg/dL (70-100 mg/dL), Na: 135 mmol/L (135-145 mmol/L), K: 5.7 mmol/L (3.5-5.1 mmol/L), Ca: 10.25 mg/dL (8.6-10.20 mg/dL), IgG: 892 mg/dL (650-1600mg/dL), IgA: 654mg/dL (70-400 mg/dL), IgM: 42 mg/dL (50-300mg/dL). RBC: 2.62x10^6/uL (4.2-5.4x10^6/uL), Hb: 8.2 gm/dL (12.0-16.0 gm/dL), Hct: 24.5 % (37-47%), Plt: 11.7 x10^4/dL (15-40 x10^4/dL), WBC: 3200/uL (4500-11000/uL), Lymphocyte: 6.9% (20.0-45.0%), Neutrophil: 88.8% (45.0-75.0%), Monocyte:3.4% (0.0-9.0%), Eosinophil: 0.5% (1.0-3.0%), Basophil: 0.4% (0.0-1.0%) . Laboratory tests of tumor markers were within the normal range with CA- 125 : 12.97 U/mL (<35.00 U/mL), CEA: 2.32 ng/mL (<5.0 ng/mL).

CASE RESULT:

Histopathologic Findings:
Microscopically, the bone marrow revealed an increasing accumulation of histiocytes with abundant eosinophilic granular or foamy cytoplasm. Needle-like crystalline materials were noted in most of the histiocytes. Many plasma cells were also noted and focally with mild nuclear atypia. No necrosis was noted.

Immunohistochemistry:
Sections of tissue specimen were subjected for immunohistochemical evaluation. On immunohistochemical analysis, the plasma cells were positive for CD138 and Kappa and negative for CD68 and Lambda. The histiocytes were positive for CD68 and negative for CD138.

Differential diagnosis:

1. Langerhans histiocytosis.
2. Gaucher's disease.
3. Granular cell tumor.
4. Crystal storing histiocytosis.

Diagnosis: Crystal storing histiocytosis associated with multiple myeloma.

Comments:
Crystal-storing histiocytosis (CSH) is a rare disorder characterized by the accumulation of needle-like crystalline material in the cytoplasm of histiocytes. CSH is typically associated with disorders that express monoclonal immunoglobulins, such as multiple myeloma (MM), lymphoplasmacytic lymphoma (LPL), and monoclonal gammopathy of undetermined significance (MGUS). Other rare, non-immune causes of CSH include treatment with clofazimine for lepromatous leprosy, in association with Charcot-Leyden crystals, or due to silica exposure. CSH are subdivided into two categories: (1) localized CSH (L-CSH), defined as a single deposit involving only one organ or site (for example, CSH involving the cornea and conjunctiva of the same eye would still be classified as L-CSH) and (2) generalized CSH (G-CSH), defined as involving two or more distant organs or sites (for example, bone marrow and kidney). Snjezana Dogan reviewed 80 cases of CSH in literatures and showed that 58% of the patients presented with L-CSH and, of these, 35% occurred in the head and neck, with the most common site being the eye/orbit. The second most common site for L-CSH was the lung and pleura. The remaining 42% of patients had G-CSH and the most frequently involved sites in G-CSH were the bone marrow, liver, lymph nodes, spleen and kidney.
The exact mechanism for crystal formation in CSH is not well understood and may involve multiple factors, ranging from simple overproduction to abnormal secretion to impaired excretion of immunoglobulin. Circumstantial evidence indicates that crystallogenesis is more related to the type of light chain (particularly kappa) rather than to a specific heavy chain. CSH has been reported to show a prominent association with lymphoplasmacytic neoplasms expressing immunoglobulin kappa light chain without any association with a specific type of immunoglobulin heavy chain. These findings suggest that immunoglobulin may have a role in the pathogenesis of CSH. In a very elaborate study, Lebeau et al. examined the molecular configuration of a stored kappa light chain in a patient with G-CSH associated with monoclonal gammopathy and observed that the light chain was structurally altered by several amino acid substitutions. They postulated that conformational alteration induced by the abnormal amino acid sequences was a probable crucial factor in the pathogenesis of CSH, promoting crystallization of the protein or adversely affecting its intralysosomal degradation or both. MS (mass spectrometry) findings suggest that Ig alterations and/ or possibly defects in the ability of histiocytes to process Ig play a role in pathogenesis.

Given their rarity, the appearance of crystal-laden macrophages in the bone marrow often presents diagnostic difficulties because those cells may mimic Gaucher cells or so-called pseudo-Gaucher cells in chronic myelogenous leukemia (CML). CSH in extramedullary sites has been mistaken for adult rhabdomyoma, Weber- Christian disease, or other types of histiocytosis. Pathologists should be aware of several problematic issues in evaluating cases of CSH. Not infrequently the cytoplasm of the histiocytes is so deeply eosinophilic and opaque that it will obscure any inclusions, crystals, or striations on microscopic examination resulting in a missed diagnosis. In most cases of CSH, the histiocytic component is dominant and, as such, may mask the neoplastic nature of any background lymphocytes or plasma cells.

The incidence of CSH is equal between the genders and with a median age of 60 years (range, 13-81). Patients presented with symptoms related to various underlying conditions. Although the majority of patients with CSH present clinically with an asymptomatic mass or swelling, often associated with a yellow or tan hue, there are exceptions. De Alba Campomanes et al. describe an

orbital CSH in a 66-year-old man that was associated with progressive ptosis, proptosis, and external ophthalmoplegia. Sailey et al. reported a cardiac CSH in a 64-year-old man that was responsible for recurrent atrial arrhythmias and dizziness, and Kapadia et al. mentioned an 18-year-old woman with a ‘‘symptomatic’’ CSH of the right lateral wall of the nasopharynx extending to the soft palate.

Macroscopically, the mass of L-CSH usually shows yellow–brown, poorly demarcated soft tissue mass that varied on cross section from grey–white to yellow–tan. Histologically, the mass of L-CSH is composed of sheets of eosinophilic epithelioid to spindle-shaped histiocytes with poorly defined margins. The nuclei are bland, round to ovoid and often contain small nucleoli. Lymphocytes and plasma cells of varying proportions and maturity are commonly observed in the background, arranged either diffusely and/or as small aggregates. The histiocytes contain numerous eosinophilic refractile crystals that distended their cytoplasm.
Bone marrow biopsy reveals an increasing accumulation of histiocytes stuffed with needle-like crystalline material in a proportion of 30% and 50% of the total cell volume. Additionally, erythrophagocytosis may observed in some cases of CSH. Plasma cells without significant nuclear atypia are rarely admixed in the
groups of crystal-laden histiocytes and hematopoietic cells. Immunohistochemically, the histiocytes were strongly positive for CD68, alpha-1-antitrypsin, and alpha- 1-antichymotrypsin and negative for CD138, desmin, myoglobin, S-100 protein, CD1a, and cytokeratin AE1/AE3. The majority of the crystal-storing histiocytes are positive for IgA and IgG heavy chains as well as light chains. However, IgM and IgD in histiocytes were reported in some cases of CSH

A high degree of awareness and a thorough knowledge of the differential diagnosis are essential for performing appropriate stains. Conditions mimicking CSH include mycobacterial and fungal infections, mycobacterial spindle cell pseudotumor, malakoplakia, hemophagocytic lymphohistiocytic syndrome, storage diseases such as Gaucher’s disease, histiocytic lesions such as xanthogranuloma, Langerhans histiocytosis, fibrous histiocytoma, Rosai Dorfman disease and other tumors including rhabdomyoma, granular cell tumor and oncocytic neoplasms. The ultrastructure of the crystalline inclusions distinguishes the histiocytes in CSH from glucocerebroside- storing real Gaucher cells as well as from the so-called pseudo-Gaucher cells that are sometimes observed in CML and thalassemia. In contrast, macrophages in CSH present with many often membrane-bound electron-dense rhomboid, hexagonal, or more needle-like crystal profiles in the cytoplasm. A granular cell tumor is positive for S-100 protein and does not contain crystals or immunoglobulins. In contrast to the round to ovoid nuclei seen in the histiocytes of CSH, the nuclei of the histiocytic cells in LCH are folded or grooved resembling a coffee bean and are immunoreactive for CD1a. Langerhans cell histiocytosis is commonly associated with a component of eosinophils which are absent in CSH. The presence of xanthoma cells, positive immunoreactivity for factor XIIIa, and absence of immunoglobulins separate this lesion from CSH. In Gaucher’s disease the striated appearance is due to the deposition of glucocerebroside not immunoglobulins. Moreover, the Gaucher cell is usually strongly positive for iron as opposed to the histiocytes in CSH. Although malakoplakia is found most often in the urinary tract, it has been observed in many other sites, including the head and neck. Pathologically it is composed of sheets of CD68-positive histiocytes (von Hansemann histiocytes) and scattered pathognomonic Michaelis-Gutmann bodies and may contain bacteria on Gram stain. It also lacks immunoglobulins. CSH with a prominent component of spindle-shaped histiocytes might invite suspicion for a mycobacterial spindle cell pseudotumor. Stains for acid fast bacilli will readily resolve this dilemma.

Treatment and prognosis of patients with CSH vary according to the associated disease. With the exception of a few reports, there is very little information available regarding the specific response of CSH following chemotherapy or simple excision. There is also data indicating that the number of

foci of CSH may also influence prognosis; patients with G-CSH tend to have a worst prognosis than those with L-CSH. Interestingly, many myeloma patients with CSH have reported survivals of 5–15 years after diagnosis, which is longer than the median survival for CSHs. This extended survival may be related to the fact that myeloma patients with CSH commonly present at an early stage with low paraprotein levels, hypogammaglobulinemia, and minimal plasma cell infiltrates and that the symptoms of immunoglobulin crystallization might lead to diagnosis at an earlier stage of disease than would otherwise occur.

In conclusion, CSH is an uncommon lesion that occurs over a broad age range (13–81 years) with an equal gender distribution. It may be either localized or generalized and involve almost any anatomic site. Its importance lies in the fact that in 90% of cases it is associated with a serious LP-PCD, especially MM, LPL, and MGUS. Identification of CSH requires careful evaluation of histiocytic contents in an optimally stained H&E stained slide under high magnification and confirmation by immunohistochemical staining. A high degree of awareness and a thorough knowledge of the differential diagnosis are essential for making an accurate diagnosis.

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Case Number: 512
Slide Number: 17-15255
Slide View:
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CASE HISTORY:

Signalment: a 51-year-old woman

The patient presented with right peri-orbital swelling that had been increasing in size over the past one month prior to the admission.

She had severe microcytic anemia and old rhegmatogenous retinal detachment of the left eye due to trauma leaving impaired visual acuity 20/400 (-18.00/-3.50x150). Upon physical examination, she had upper and lower eyelid swelling with palpable hard but painless mass occupying the lateral inferior orbit. It made the extra-ocular movement of the right eye limited; however, there was no extraocular muscle pain. Her best corrected visual acuity dropped to 20/50 (-12.25/-3.75x83). She also had a right pre-auricular lymphadenopathy.

Blood work showed that she had a white blood cell (WBC) count of 5.71×10^3 /μL (neutrophils: 9.4 % with ANC: 0.07×10^3 /μL, monocytes: 40 %, lymphocytes: 50 %), haemoglobin of 9.7 g/dL, and platelet count of 382 × 103 /μL. Her serum chemistry and the result of chest X-ray were also normal. A magnetic resonance imaging of the orbits demonstrated one well-defined, homogeneous enhanced mass lesion (3.6 x 3.4 cm) adjacent to the right lateral rectus muscle with eyeball compression and extraconal cavity invasion.

An incisional biopsy of the right orbital mass via orbitotomy was carried out and we found grayish lobulated fat tissues with sclerosing change in the orbit. Orbicularis oculi muscles were also biopsied. While awaiting biopsy results, we started our patient on pulse therapy with methylprednisolone, 500mg, BID for 3 days, and the mass had a mild decrease in size.

CASE RESULT:

Histopathological Findings:

The results of the biopsy showed fibroadipose tissue with a diffuse infiltration of neoplastic cells. These cells infiltrated around the adipocytes without rimming the fat cells. The neoplastic cells ranged from medium to large in size and exhibited round and vesicular to indented nuclei with a fine chromatin pattern and small nucleoli. They exhibited moderate to abundant amount of cytoplasm, which was focally clear. Frequent mitoses and many apoptotic bodies were identified.

Immunohistochemically, these neoplastic cells expressed bcl-2 (weak), CD34, CD43, and CD117 but not CD10, CD20, CD56, MPO or PAX5. Weak CD79a expression was identified. The proliferation index as determined by Ki67 immunostaining was around 70%. Scattered cells expressed CD3, CD5, or CD20, and these were considered reactive T or B cells, not the neoplastic component. CD35 staining is negative for follicular dendritic meshworks.

Pathological Diagnosis: Myeloid sarcoma

Differential Diagnosis:

1. Non-Hodgkin's lymphoma
2. Rhabdomyosarcoma
3. Neuroblastoma

Following Clinical Course:

After pathologically diagnosed with myeloid sarcoma, bone marrow biopsy was performed, which revealed myelofibrosis and hypocellular marrow with focal residual hematopoietic cells. No evident increased blast cells were labeled with H&E stain and immunohistochemical staining with MPO, CD34 and CD117. The DNA extracted from bone marrow was subjected to allele-specific PCR amplification for the detection of mutation in codon 617 of JAK2 gene (V617F). The result showed presence of V617F mutation in JAK2 gene.

Then induction chemotherapy with I2A5 (Idarubicin and Cytarabine) and local radiotherapy were started. Due to stable condition, she was arranged for follow-up at outpatient department.

However, one month later, during follow-up at the outpatient department, white blood cell differential count revealed 6.5% blast cells, so acute leukemia transformation was suspected and bone marrow biopsy was carried out. Microscopically, it showed hypercellular marrow (80% cellularity) with increased myeloid series. Immunohistochemical staining showed CD34 (-), c-kit (++,20%), and MPO (+), which suggested acute myeloid leukemia transformation. The DNA extracted from bone marrow was subjected to allele-specific PCR amplification for the detection of mutation in codon 617 of JAK2 gene (V617F). The result showed no detectable V617F mutation in JAK2 gene.

Afterwards, I2A5 chemotherapy with Idarubicin 12 mg/m2 was given for two days and Cytarabine 100 mg/m2 was given for five days. Head and Orbits magnetic resonance imaging displayed apparent resolving right orbital myeloid sarcoma. Allogeneic sibling peripheral blood stem cell transplant was planned to be performed.

One month later, she was admitted for allogeneic sibling peripheral blood stem cell transplant. She received conditioning chemotherapy initially. Unfortunately, fever with productive cough and mild chest discomfort were then noted. So conditioning chemotherapy was held and empirical antibiotic therapy was given. However, her condition kept progressing with prolonged neutropenia and sepsis with atypical pneumonia, which was not suitable for stem cell transplantation due to high risk of mortality. Therefore, allogeneic sibling peripheral blood stem cell transplant was finally cancelled. Then, due to impending respiratory failure, she was transferred to MICU. Considering about her poor prognosis and critical condition, the patient and her family decided to receive hospice care and was discharged from hospice ward due to terminal condition on the same day.

Final Diagnosis: Myeloid sarcoma of orbital with acute myeloid leukemia transformation from myelofibrosis

Discussion:

Myeloid sarcoma is a rare malignant neoplasm that is characterized by one or more tumor masses, consisting of myeloblasts presenting at an extra-medullary site [1]. Previous literatures named the tumors chloroma, which exhibiting green color due to the presence of myeloperoxidase in many of these tumors exposed to ultraviolet light. There have been various names of myeloid sarcoma, including myeloblastoma, myelocytoma, chloroleukaemia, and myeloid sarcoma, which is currently

used by the World Health Organization [2, 3]. It most commonly occurs in skin, bone or lymph node, but it actually may arise in almost any site of the body, including a rare location, the orbit [1].

Myeloid sarcoma may develop de novo or concurrently with AML, myelo-proliferative neoplasm (MPN), or MDS, which has been associated with a variety of chromosomal abnormalities, including MLL gene rearrangement and t(8;21) translocation. It usually corresponds to AML with a French-American-British (FAB) classification of M5a, M5b, M4, and M2 [4].

In patients who develop myeloid sarcoma before leukemia, computed tomography or magnetic resonance imaging features are not specific enough to distinguish myeloid sarcoma from other tumors. It is most frequently confused with idiopathic orbital pseudotumor, non-Hodgkin's lymphoma, rhabdomyosarcoma, and neuroblastoma [3]. To establish an accurate diagnosis of orbital myeloid sarcoma, appropriate immunohistochemical staining in these cases is particularly essential. Reports have noted a number of reliable markers such as CD43, CD65/KP1, myeloperoxidase, and CD 117. Of these markers, CD43 and CD65/KP1 have been reported in as many as 100% of tissue samples of myeloid sarcoma, which was very reliable markers for identifying this disease. In our case, microscopically, it showed monotonous atypical blasts with CD117 and CD34 positive, which was definitely diagnosed as myeloid sarcoma.

Intervals between the development of myeloid sarcoma and systemic leukemia varying from 5 months to 16 years. Several larger case reports have demonstrated 3- and 5-year survivals at 30% and 21%, respectively. Regardless of whether myeloid sarcoma is associated with systemic AML or not, it is treated with an aggressive chemotherapy regimen as AML alone. When myeloid sarcoma causes compromise to vital structures, debulking surgery and/or radiation treatment has been revealed to reduce the incidence of progression to AML and improved survival. In this case, the interval between initial presentation of myeloid sarcoma and AML transformation was about three months and the patient eventually passed away within six months.

In conclusion, we present a unique case of orbital myeloid sarcoma with development of acute myeloid leukemia within three months. It was difficult to make diagnosis based on clinical manifestation alone for lots of differential diagnosis were included. Special stains and immunohistochemical staining play the critical role in establishing definite diagnosis.

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CASE HISTORY:

Signalment: A 16-year-old, intact male, Russian Blue cat
The animal was presented to the local animal hospital due to acute onset of paraparesis of the thoracic limbs. Radiographic and orthopedic examination at the local hospital revealed no abnormality and the patient were treated with dexamethasone 0.4 mg/kg/day. Five days later, the patient's neurologic status deteriorated and progressed to be tetraparesis and therefore the patient was referred to National Taiwan University Veterinary Hospital (NTUVH). The neurological examination revealed nonambulatory tetraparesis with decreased postural reactions of all four limbs. Several subtle cranial nerve deficits were also detected. A neurolocalization of the C6-T2 spinal cord segments was temporarily made. Magnetic resonance imaging revealed multifocal nerve roots swelling on C6/C7 and C7/T1 and ultrasonography revealed swelling of Rt. brachial plexus. Cerebrospinal fluid analysis revealed medium to large sized lymphocytes with high cellularity ($2.4*10^6$/L) and increased protein concentration (70 mg/dL). CSF bacterial culture and PCR for *Toxoplasma gondii*, Feline leukemia virus and Feline corona virus were all negative. A tentative diagnosis of CNS lymphoma was made. After 8 days of steroid therapy, surgical biopsy of the right musculocutaneous nerve and pectoralis muscle was performed. However, after the surgery, the patient died of cardiorespiratory failure, assumed to be related to unclassified cardiomyopathy. Necropsy was not performed.

Gross Findings:
No remarkable finding was identified.

CASE RESULT:

Histopathological Findings:
Multifocally to coalescently, within the epineurium, the nerve fascicles are interrupted by the neoplastic infiltrates, resulting in dissolution and fragmentation of the axons. The neoplastic cells are densely packed in sheets and usually surround the vasculatures. Neoplastic cells are round and contain single intermediate sized (approximately 1.5 to 2 times larger than RBCs) nuclei and few cytoplasmic volumes. The nuclei have smudged and clump chromatin patterns and contain distinct nucleoli. Mitosis averages one per high power field. The biopsied muscle is generally within normal histopathological limit. A few muscle fibers are lined by increased numbers of plump satellite cells.

Differential diagnosis:
1. Lymphoma
2. Inflammation (infection or immune-mediated disease)

Immunohistochemistry:
The neoplastic cells are immunoreactive for CD79a and negative for CD3.

Pathological Diagnosis:
Neurolymphomatosis (neurotropic lymphoma), B cell, right musculocutaneous nerve

DISCUSSION:

Based on histologic observation of the specimens and immunocytochemistry, diagnosis of a neurotropic lymphoma or neurolymphomatosis was made. In the present case, the neoplastic cells were positively immunoreactive for CD79a. This was indicative of the B cells origin. According to the location, histopathology and result of IHC staining, the diagnosis of the present case is a large B cell neurolymphomatosis. Although CNS lymphoma and stage IV lymphoma/lymphoid leukemia could readily metastasize to the peripheral nerves. In this case, based on the radiographic findings, there was no evidence of CNS lymphoma and polyneuropathy. Therefore, clinical manifestation and histopathological changes indicate primary lymphoma of the peripheral nerves. Most lymphomas in the nervous system of domestic animals occur as secondary lymphomas in conjunction with generalized metastatic lymphoma[1].

In feline, lymphoma is the most common neoplasm affecting the spinal cord and the second most common intracranial tumor[2], but the overall prevalence of primary nervous lymphoma is low. Lymphoma in nervous system could be manifested as intraparenchymal brain lymphoma, lymphomatosis cerebri, intravascular lymphoma, lymphomatous choroiditis and meningitis, extradural, intradural-extramedullary or intramedullary lymphoma in the spinal cord, or neurolymphomatosis in the peripheral nerves[2]. Among them, neurolymphomatosis is defined as an infiltration of peripheral nerves or nerve roots by a neurotropic B- or T-cell lymphoma or with concurrent leukemia[1].

Neurolymphomatosis is associated with neurological deficits of the affected spinal cord roots, nerve or trunk[3]. Since neoplastic lymphocytes heavily infiltrate in peripheral nerves causing Wallerian degeneration of the nerves with preservation of axons, patients with neurolymphomatosis usually present with progressive peripheral neuropathy, including mononeuropathy, asymmetrical regional neuropathies in the thoracic or pelvic limb, plexopathy, polyradiculopathies, or cauda equina syndrome [4-6]. The symptoms can be incited by various etiology that cause diagnostic confusion, and lymphoma certainly deserves consideration in the presence of any aforementioned neuropathy despite its infrequency. In feline, immune mediated and infectious polyradiculoneuritis should be considered as differential diagnoses [4, 7, 8]. Immune-mediated disorders include feline acute idiopathic polyneuropathy, which is clinically identical to Guillain-Barre syndrome in humans and usually cause an acute onset of neuropathy, and the other one is its chronic counterpart, chronic inflammatory demyelinating polyneuropathy (CIDP) or feline chronic relapsing polyneuropathy, which is slowly progressive and tend to spontaneously recover and relapse[9]. Infectious agents that cause peripheral neuropathy in cats include rabies or pseudorabies viruses[10], feline leukemia virus[11] and Toxoplasma godii[9]. Molecular and serologic tests and immunolabeling are able to identify infectious etiologies.

Diagnosis of neurolymphomatosis mainly rely on the clinical presentation and on CT scan combined with myelography and MRI scan, which allows excellent soft tissue delineation and is a gold standard for diagnosis of tumors of nerve[12]. Nevertheless, neurolymphomatosis cannot be differentiated from other neoplastic or inflammatory diseases of the peripheral nerves[3]. Additionally, concurrent cerebrospinal fluid examination might be useful in demonstrating a lymphocytic pleocytosis, which could provide the prospective evidence of neurolymphomatosis. For definite diagnosis, nerve biopsies, directed by imaging techniques with immunocytochemistry/ immunohistochemistry studies should be performed in suspected cases[5].

Until now, to our knowledge, only seven cats with neurolymphomastosis have been reported[3, 6, 13-16]. The disease develops in feline with the mean age of 8.8 years old (ranging from 4 to 16 years old) and without sexual predilection. The most common affected nerves are C6 to T2 nerve roots (7/8) and their descending brachial plexuses (6/8) that often leads to the clinical sign of bearing or non-bearing lameness of forelimbs. Besides, in two cases, multiple cranial nerves (CN III, V, VIII) were involved and cause the absence of eye reflection. 4 out of 8 cases were of B-cell lineage

(immunoreactive to CD79a, PAX5, or CD20) while one was of T-cell (CD3 immmunoreactive) lineage and one is non-B, non-T cell in origin and the remainders are unknown. Most of the cats were euthanized at the time of diagnosis due to poor response to the therapy. One cats receiving dexamethasone, mannitol, furosemide and diazepam for treating the seizure survived for 10 months.

In the present case, the patient showed severe panting after anesthesia and eventually died. Under X ray, lung showed increased opacity, and the cause of death was presumed to be cardiorespiratory failure. However, the actual cascade of disease progression and death remained uncertain since the necropsy was not allowed to perform.

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CASE HISTORY:

Signalment: A 53-year-old man, an indigenous people in Taiwan.

Clinical History:

The 53-year-old male was now an inmate in Hualien Prison. He came to our outpatient department of urology due to gradually enlargement of his right-side scrotum for several months, without painful sensation or dysuria. No fever, cold sweating, general fatigue or body weight loss was seen. There is no history of diabetes mellitus, hypertension or coronary disease. The patient has the habitus of cigarette smoking (1-2 packs per day) & alcohol consumption, and denied any family, travel or allergic history. Initial sonography of right-side scrotum exhibited an enlarged testis tumor, with heterogeneous echoic signals. The laboratory tests of the blood and urine displayed no significance. Tumor makers of AFP, beta-HCG & LDH were within the normal range. He then received right-side radical orchiectomy. At surgery, the testis and spermatic cord was easily pushed and dissected with surgeon's fingers.

Gross Findings:

Macroscopically, the specimen submitted consistent of a tan-gray scrotal tissue measuring about 6.2 x 5.3 x 4.6 cm in total size, fixed in formalin. The testis and epididymis was well-demarcated and accounted approximately 4.6 x 3.2 x 3.1 & 3.2 x 2.6 x 2.4 cm in size respectively. The cutting surfaces of the testis and epididymis displayed extensively homogenous tan-gray in color and rubber in consistency with focal areas of hemorrhage, but without necrosis. The spermatic cord was 5.6 cm in length and showed no significant finding.

CASE RESULT:

Histopathological Findings:

Microscopically, sections of the testis showed pictures of diffusely monotonous neoplastic cells infiltrating in the testicular parenchyma, around the seminiferous tubules and extension to the outer capsule, which causing arrest of spermatogenesis, focal interstitial fibrosis, tubular hyalinization and even loss of tubules. The tumor composed of medium to large centroblast-like tumor cells with enlarged hyperchromatic nuclei and some clear to faint eosinophilic cytoplasm. Sections of the rete testis and epididymis exhibited infiltration of morphologically identical neoplastic cells. Lymphovascular space invasion was not observed. Surgical margin of the spermatic cord was not involvement by the tumor cells. Immunohischemical analysis demonstrated that the tumor cells were immunoreactivity to CD20, Bcl-2, Bcl-6, MUM1 and c-Myc, but negative for cytokeratin (CK), CD3,

CD10, CD30, CD117 (c-kit), Oct-4, or PLAP immunostaining. Additionally, Ki-67 was identified in approximately 90% of the tumor cells. Further analysis of bone marrow & CSF showed negative findings.

Pathological Diagnosis:
Primary diffuse large B-cell lymphoma (activated B-cell type) of right testis, Stage IE at least

Differential diagnosis:
1. Embryonal carcinoma (Germ cell tumor)
2. Seminoma, anaplastic variant
3. Plasmacytoma, anaplastic variant
4. Rhabdomyosarcoma

Discussion:

Non-Hodgkin's lymphomas (NHL) present with majority of nodal onset and 30% of extra-nodal onset.[1,2] Most patients with extra-nodal NHL are histopathologically diagnosed as diffuse large B-cell lymphoma.[1-3] The most frequent site of extra-nodal NHL is the gastrointestinal tract. Primary testicular lymphomas (PTLs) are rare and usually occur predominantly in male older than 60 years.[3,4] PTLs account 1-2 % and 1-7% of the lymphomas and testicular tumors respectively.[3-5] The etiology of PTC is still unclear and may associate with the episodes of chronic orchitis, undescended testis, previous trauma, and filariasis of the spermatic cord.[2,4,5] Among PTLs, 80-90% cases are diagnosed as primary testicular diffuse large B cell lymphoma (PT-DLBCL).[5,6]

PT-DLBCL has been known to be an aggressive lymphoma. 50-60% of the patients with PT-DLBCL are initially diagnosed at stage I and 20-30% at stage II.[6,7] Previous retrospective study carried out the 5- and 10-year PFS (Progression-Free-Survival) rates were 48% and 33%.[7-9] The B symptoms are often appeared at advanced stages.[7,8] With aggressive therapy, most patients could achieve complete remission. However, the prognosis is poor, because of its high extra-nodal spreading risk to the central nerve system (CNS, 20-35%), contralateral testis (5-35%), Waldeyer's ring, skin and the lung, even ten years after diagnosis. [6-8]

Basing on the gene expression profiling (GEP), the 2008 WHO classification categorized DLBCLs, not otherwise specified (NOS), into germinal center B-cell-like (GCB) and activated B-cell-like (ABC) subgroups, because of their different chromosomal alterations, origin of lymphoma cells, activation of internal signaling pathways and clinical prognosis.[9] Since GEP-defined subgroups is clinically difficult to regularly perform, immunohistochemistry with antibodies including MUM1, Bcl-6 and CD10 has been applied, which could provide the confident correlations.[10,11] ABC subtype is now realized to display a worse outcome with standard chemotherapy of R-CHOP (Rituximab-Cyclophosphamide Hydroxydaunorubicin/doxorubicin, Oncovin/vincristine and Prednisolone/prednisone).[6-8]

Furthermore, the WHO update indicates that immunohistochemical coexpression of Myc and Bcl-2 biomakers within DLBCL NOS, also called double-expressor/hit lymphomas, could indicate an adverse prognosis.[9,10] In fact, most of the patients with PT-DLBCL belong to the ABC phenotype, and therefore have diverse rate of complete remission, even combination of anti-CD20 monoclonal antibodies (Rituximab).[11,12] Previous study has been proven that the patients with the IPI (International Prognostic Index) score <1 have a significantly increased in survival as comparing to the patients with the IPI score >1. Besides, the diameter of the testicular tumor more than 9.0 cm in length also indicates a poor prognostic factor.[11,12] In presented case, IPI score of the tumor was 1 and a maximum diameter of 6.2 cm, which provide clinical information of the low to intermediate risk. However, lymphoma cells of this case were immunoreactivity for Bcl-2, Bcl-6, MUM1 and c-Myc, and negative for CD10 and. The patient was therefore recognized to be the ABC immuno-phenotype and belong to the group of double-hit lymphomas, which indicating a poor outcome and adverse prognosis.

IELSG (International Extra-nodal Lymphoma Study Group) effectively provides the standard protocol in treatment of testicular primitive lymphoma, which combines surgical resection, chemotherapy with CNS prophylaxis, and scrotal radiotherapy.[10-12] Our patient revived left-side radical orchiectomy, systemic R-CHOP and intrathecal methotrexate chemotherapy, and contralateral testicular radiotherapy. The tumor was regressed well. Following PET/CT displayed no recurrence after half a year since the diagnosis.

In conclusion, we herein present a patient with PT-DLBCL having complete remission after the combined therapeutic protocols. However, the prognosis remains unfavorable. Therefore, more investigations are required to find out more effective and potential reagents for improving the survival of this malignant lymphoma.

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CASE HISTORY:

Signalment & History:

An adult female bottlenose dolphin (*Tursiops truncatus*) was stranded and found dead on the east coast of Taiwan. Necropsy and tissue sample collection for histopathology were performed.

Gross Findings:

The dorsal fin and left pectoral fin were lost with sharp incisions. There were several round-shaped wounds (caused by cookiecutter sharks) on the left-dorsal aspect of body trunk. A fixed, well-encapsulated, smooth bosselated, 5 x 4 x 3 cm mass was found in the middle mediastinal region, and the cut surface showed variable-sized, jigsaw puzzle-like, white to tan nodules demarcated by white sclerotic septa.

CASE RESULT:

Histopathological Findings:

The mass is encapsulated and composed of polygonal neoplastic cells arranged in solid sheet and separated by varying amount of fibrous connective tissue to form a lobular pattern. The neoplastic cells have a scant to moderate amount of indistinctly bordered eosinophilic cytoplasm and contain a round to polygonal nucleus with open chromatin and prominent nucleus. Multifocally, there are aggregates of lymphocytes throughout the whole tumor growth. Scattered granulocytes either neutrophils or eosinophils are noted. Occasionally, there are small numbers of individualized apoptotic neoplastic cells. No evidence of vascular invasion is noted.

Morphological Diagnosis:

Thymoma, most likely, mediastinal mass

Differential diagnosis:

The major differential diagnoses of the current tumor growth include epithelial predominant thymoma, thymic carcinoma, or other carcinoma from thyroid gland, parathyroid gland, and lung.

Immunohistochemical (IHC) Stainings:

The neoplastic cells are intensely positive for cytokeratin and P63, focally positive for CK19, and negative for CD5, CD117, vimentin, thyroid transcription factor–1, synaptophysin and chromogranin A.

Final Diagnosis:

Based on the anatomic location, histological features and IHC characteristics, the diagnosis is epithelial predominant thymoma.

Discussion:

Thymomas are neoplasms derived from thymic epithelial cells with various degrees of benign lymphoid proliferation (Valli et al., 2016). In animals, thymomas are classified as lymphoid, epithelial, and mixed types (lymphoid and epithelial) on the basis of the predominant cell population of the neoplasm (Li et al., 2016; Valli et al., 2016). The epithelial thymomas have different morphological variants, such as clear-cell and spindle-cell based on the histologic features of the neoplastic cells (Valli et al., 2016). Although thymomas are considered an uncommon neoplasm, cases have been reported in different animal species, including cat, dog, goat, sheep, cattle, horse, rat, rabbit, crab-eating macaque (*Macaca fascicularis*), African spot-necked otter (*Lutra maculicollis*), Java sparrow (*Padda oryzivora*), polar bear (*Ursus maritimus*), Siberian tiger (syn. Amur tiger; *Panthera tigris altaica*), and Barbary sheep (*Ammotragus lervia*) (Li et al., 2016; Valli et al., 2016).

In humans, there are five major histological types of thymoma, including type A, type AB (mixed), type B1, type B2, and type B3 (Rodig and Chan, 2013). Apparently, the histological types used in humans are different from those used in animals, especially the term ”mixed”. The differences of histological types between humans and animals are summarized in Table 1. The Masaoka-Koga staging system (Table 2) has been most widely used for human thymoma (Rodig and Chan, 2013). According to previous studies, the stage distributions were as follows: A) I (25%), II (47%), III (17%), IV (4%), and (7%) not classified, and the overall survival was 95% at 5 years, 91% at 10 years and 91% at 15 years (Safieddine et al., 2014); B) I (44%), II (23%), III (27%), and IV (6%): the 5-year actuarial survival rates for these stages were 90%, 88%, 67%, and 50%, respectively, and the 10-year actuarial survival rates were 80%, 78%, 47%, and 30%, respectively (Regnard et al., 1996). It is suggested that higher Masaoka-Koga stage is associated with an increased risk of incomplete resection and recurrence. However, Masaoka-Koga staging system has not been applied in animal cases.

The current thymoma is classified ad epithelial predominant thymoma and resembling the human B3 and stage II thymoma.

Table 1. Major histological types of thymoma

Humans	Morphology	Animals	Morphology
A	Spindle cells	Spindle cells	Spindle cells
AB (Mixed)	A + B		
B1	Lymphoid predominant	Lymphoid	Lymphoid predominant
B2	Lymphoid + epithelial	Mixed	Lymphoid + epithelial
B3	Epithelial predominant	Epithelial	Epithelial predominant

References:

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Case Number: 516
Slide Number: S18-8694E
Slide View: http://www.ivp.nchu.edu.tw/slide_view.php?id=1577

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CASE HISTORY:

Signalment: A 80-year-old male with progressive low urinary tract symptoms (LUTS)

A 80-year-old male came to the outpatient department (OPD) with chief complaint of progressive low urinary tract symptoms (LUTS). He had hypertension under regular medical treatment and coronary artery disease (CAD) status post percutaneous coronary intervension (PCI) with stent implantation. Minor surgery including bilateral herniplasty and left hydrocelectomy were performed. No diabetes mellitus (DM) and no obvious allgeric history were told. He had past history of cigarette consumption and smoking cessation for more than 10 years.

Sonographic examination reaveled left renal cyst, urinary bladder distension, and prostate enlargment. The other laboratory examination was within normal limit. Under the impression of benign prostatic hyperplasia (BPH), transurethral resection of the prostate (TUR-P) with green light laser was performed.

Gross Findings:

The submitted specimen is composed of multiple pieces of tan soft tissue, measuring 40.0 gm in total weight, fixed in formalin. Representative sections are taken and labeled as A to I.

CASE RESULT:

Histopathological Findings:

Microscopically, sections show nodular hyperplasia of prostate with prostatitis. There is also dense infiltration of small lymphocytes arranged in a single file or concentric pattern. The lymphocytes are small and angulated, and possess scant cytoplasm, coarse chromatin and inconspicuous nucleoli. Perivascular infiltration is found but lymphoepithelial lesion is not evident on CK stain. Immunohistochemical stain is performed and these small lymphocytes are positive for CD20 and bcl-2(focal), but negative for CD3, CD5, CD10, bcl-6, CD23, CD43, and Cyclin D1. CD138 highlights a few plasma cells, which are polytypic on kappa and lambda stains. The B-cell clonality demonstrated by IGH and IGK is positive. According to the above findings, Extranodal marginal zone lymphoma of mucosal-associated lymphoid tissue (MALT lymphoma) is considered.

Pathological Diagnosis: Extranodal marginal zone lymphoma of mucosa-associated lymphoid tissue (MALT lymphoma)

Differential diagnosis:

1. CLL/SLL (Chronic lymphocytic leukemia/Small lymphocytic lymphoma)
2. Follicular lymphoma
3. Mantle cell lymphoma
4. Reactive inflammatory change

Discussion:

Marginal zone lymphoma of mucosa-associated lymphoid tissue (MALT lymphoma), is the most common type of primary extranodal lymphoma. MALT lymphoma is a low grade B cell neoplasm arising in mucosal and non-mucosal extranodal sites interacting with epithelium and reactive germinal centers.

The most common common of MALT lymphoma is the gastrointestinal tract and the stomach is most common original site among the alimentary organs. Other organs and tissues, including salivary glands, lacrimal gland, lung, thyroid, and etc have also been reported. Epidemiologically studies revealed the strong evidences of the association among MALT lymphoma, *Helicobacter pylori*-associated gastritis, Hashimoto's thyroiditis, and *Campylobacter jejuni*. Patients with Sjogren disease are also reported to have a higher incidence of MALT lymphoma.

MALT lymphoma is usually localized with an indolent course. Rarely-encountered disseminated MALT lymphoma is usually refractory to chemotherapy and has a dismal prognosis. Some cases with transformation to large cell lymphoma are also reported. The immunohistochemical stain profiles of MALT lymphoma is positive for CD19, CD20, CD79a, Bcl-2 and negative for CD5, CD10, CD23.The differential diagnosis of MALT lymphoma includes (1) CLL/SLL (Chronic lymphocytic leukemia/Small lymphocytic lymphoma) (which is CD19+, CD20+, CD79a+, Bcl-2+, **CD5+**, CD10-, CD23+, Cyclin D1-); (2) Follicular lymphoma (which is CD19+, CD20+, CD79a+, Bcl-2+, CD5-, CD10+, **CD23+**, Cyclin D1-); (3) Mantle cell lymphoma (which is CD19+, CD20+, CD79a+, Bcl-2+, **CD5+**, CD10-, CD23-, **Cyclin D1+**). B-cell clonality studies are required in some difficult cases to differentiate the MALT lymphoma and the reactive inflammatory process, like this presentated case.

Primary MALT lymphoma of the prostate is rare, accounting for 0.1% of overall lymphoproliferative diseases. It is usually an incidental finding due to the level of prostate-specific antigen (PSA) is nearly always within normal limit. According to the few cases reported in the Engligh literature, the prognosis is poor with high mortality rates. Due to too few cases encountered and reported, there is no universally accepted standardized therapeutic methods or regimens. More cases should be collected and studied to reveal the nature of this disease.

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Case Number: 517
Slide number: CO18-423
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CASE HISTORY:

Signalment: A 5-year-old, intact female, Cockatiel

Clinical History:

A fast-growing mass beside the uropygial gland of the cockatiel was noticed in late April 2018. With a complaint of decreased appetite, poor spirit and affecting its motion, it was brought to Veterinary Medical Teaching Hospital of National Chung Hsing University (VMTH-NCHU) on June 1st, 2018. Palpating the mass was approximately 4 x 3.5 x 3 centimeter in size and was firm, fixed and without any fluctuation. In addition, there were multifocal hemorrhagic ulcerations on the surface of the mass and stained ruffled feathers with clotted blood. Excisional biopsy was performed on June 5th, and the mass was 5 x 3.5 x 4 centimeter in size and weighed 30.6 g. Due to the blood lost during the surgery and the mucous of the patient became pale, 1.5 ml whole blood from pigeon was transfused into the right basilic vein.

Gross Findings:

The mass was 5 x 3.5 x 4 centimeter in size with soft texture. On the cut sections, it was yellow-brown with white or yellow colloidal substances and multiple red lesions.

CASE RESULT:

Histopathological Findings:

Histopathology showed that the mass was covered by skin and located in deep dermis and hypodermis without encapsulation. There was a massive necrotic center in the mass. Also, there were abundant adipocytes with varied differentiation under high-power field. Few well-differentiated adipocytes with large intracytoplasmic lipid droplets, flatted nucleus which located on the periphery were observed within the tumor cells. However, most of the areas were poorly-differentiated lipoblasts with increasing nucleo-cytoplasmic ratio, round to oval nuclei which located on the periphery or center, more than one apparent nucleolus and variably sized of lipid droplets were contained in the cytoplasm. Mitotic figures were low. Within the adipose tissue were abundant well-differentiated thin and/or thick blood vessels with varied degree of congestion and dilation.

Histochemical staining:

Under Oil red O stain, the tumor cells presented positive reaction of the lipid droplets with reddish color.

Pathological Diagnosis: Angioliposarcoma in a Cockatiel

Differential diagnosis:
5. Subcutaneous abscess
6. Xanthoma
7. Panniculitis

Discussion:

For avian subcutaneous masses, differential diagnoses such as abscesses, panniculitis, and tumors should be taken into consideration. Subcutaneous abscesses are commonly seen in parrots and usually found on head, paranasal sinuses around eyes or lower beak. Since the heterophils of avian don't have enzymes such as peroxidase, alkaline phosphatase or catalase that can liquefy the abscesses, the abscesses of avian usually have firm texture with cheese-like substance contained. However, it won't have ulcerations or bleeding on the surface of the subcutaneous abscesses.

Subcutaneous panniculitis is usually caused by infection of *E-coli* or *Pasteurella multocida* in avian and the affected skin may become grayish yellow. Histopathology feature is abundant fat necrosis within the hypodermic with lots of inflammatory cells.

Xanthomas and lipomas are two of the most common subcutaneous tumors in avian. Xanthomas are granulomatous non-neoplastic masses, which can be found in the distal part of the wings, legs, sternum and skin that are featherless. Gross findings are white to pale yellow masses with soft and brittle texture. Also, bleeding and ulcerations may sometimes be seen on the surface. Histopathological features are lipid-filled macrophages, multinucleated giant cells, cholesterol clefts, and inflammatory cells.

Lipomas are most often found in the subcutaneous tissues of the sternum, wing, leg and abdomen. They are palpated as soft, fluctuating and well encapsulated masses with skin freely movable over the tumor. Well-differentiated adipocytes with large intracytoplasmic lipid droplets, flatted nucleus which located on the periphery were observed under histopathological findings. The malignant counterpart to the lipomas is liposarcomas, which can be divided into three types, including well-differentiated variant, anaplastic or pleomorphic variant and myxoid variant according to the cellular morphology. Liposarcomas are uncommon in pet birds. They are yellow to gray masses of the subcutis and differ from lipomas in being firmer, more infiltrative and more vascular. Liposarcomas have been described in budgerigars, cockatiels, a monk parakeet, and a grey parrot. Locations of liposarcomas include the carpus, neck, sternal subcutaneous tissues, uropygeal gland, digits and abdominal cavity. However, metastasis is rarely reported and the prognosis is grave. We can find out the cellular morphology by fine needle biopsy, but final diagnosis should be done by histopathologic evaluation. Liposarcomas are mainly diagnosed by the cellular morphology observed under H&E stain. Also, we can prepare frozen section of the tumor for Oil red O stain to present lipid droplets in the cytoplasm. On the other hand, MDM2 and CDK4 markers can be used for immunohistochemical staining if necessary. However, in the research of immunohistochemical staining of liposarcoma in dogs, the results can only be used as a reference and cannot be used as a basis for diagnosis. Besides, there is no studies have been indicated that liposarcoma of birds has adequate cross-reactivity and specificity of those antibodies. Therefore, immunohistochemical staining wasn't successfully reacted in this case.

The recommended treatment of liposarcoma in avian is complete surgical removal of tumor masses. In studies of human's and small animal's clinical cases, radiation therapy can be used as an additive way to patients whose tumor cannot be completely removed by surgery and it has been shown to reduce the recurrence rate and prolong the lifespan of the patients. In this case, the mass was very huge and was located beside the uropygial gland. It was evaluated that if the mass was removed with a complete surgical boundary, the tension of the sutures would be too tense and the healing of the incision would be greatly affected. Therefore, we decided to do excisional biopsy in this case. Under

histopathologic examination, the tumor consisted of abundant adipose tissue and lipoblasts with intracytoplasmic lipid droplets, which varied in size. Also, small, well-differentiated blood vessels, with varied degree of congestion and dilation, were observed within the tumor. According to the histopathology examination, angioliposarcoma in a cockatiel was diagnosed. Currently, there were only few cases of angioliposarcoma have been reported in human medical literatures and just as we know there is no relevant information in the veterinary literatures. Therefore, this case can only refer to the classification and prognosis of liposarcoma but can't be classified as liposarcoma. Post-operative follow-up continues.

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Case Number: 518
Slide Number: 18-7751
Slide View:
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CASE HISTORY:

Signalment: A 73-year-old, male, retired public servant

Patient had neck lymphadenopathy on and off for at least 20 years and had received lymph node biopsy at another hospital 4 years ago and only inflammation was told by the doctor. Patient had fair ADL until two months before this admission when severe soreness of bilateral lower limbs developed (107/3/15). The soreness was exacerbated while exercise and he got dizziness easily recently. He also noticed dry eyes and mild hand numbness. However, there are no hair loss, no oral ulcer, no BW loss, no arthralgia, no skin rashes. He had regular follow up in urology OPD for benign prostate hyperplasia and incidentally found anemia (Hb 4.7 g/dL) and acute kidney injury (cre 1.6 mg/dL) on 2018/4/10. So patient was referred to Hematologist for survey. Lab studies showed WBC 6390, Hb 4.7-->6.2, PLT 397K, GOT/GPT 12/7 BUN/Cre 25/1.3, LDH 122, TBI/DBI 0.5/0.2,Fe/TIBC 27/187=14.4%, Na/K 136/4.1, A/G 2.8/7.9,Ca 2.02, INR 1.19, LDH 122, UA 8.7, UPCR 0.2, IgG 5760, IgA 746, IgM 586, CRP 4.49, Kappa/lambda 274/157=1.5, haptoglobin 43.4 mg/dL, B2 MG 5998 ng/mL, while CRP 4.49 mg/dL and ESR >150 mm/Hr, HBsAg-, anti-HBs+, anti-HBc+, anti-HCV-, BM smear showed increased abnormal plasma cells, rheumatoid factor 30.3 IU/mL, Anti CCP:43.7 EU/mL, ANA 1:40 (+), anti-neutrophil cytoplasmic Ab(-), Anti-dsDNA Ab equivocal. Initially, multiple myeloma was suspected, but subsequent bone marrow biopsy showed reactive plasma cell proliferation, HHV8 (-), IFE of BM biopsy showed polyclonal gammopathy. Thus, multiple myeloma was excluded. Prednisolone 10 mg daily was prescribed since 107/4/12. His anemia was responsive to prednisolone therapy, and Hb increased from 4.7 to 6.2 g/dL on 107/5/8.

Patient was referred to rheumatologist for polyclonal gammopathy r/o autoimmune disease. Physical examinations showed neck with multiple lymphadenopathy and chest radiography showed ill-defined patches at bilateral lungs. We arranged computed tomography of head and neck, and chest, which showed multiple lymphadenopathy over bilateral necks and mediastinum, and multifocal ill-defined small patchy opacities over both perihilar regions and RML with soft-tissue component. Under the impression of Castleman's disease, patient was admitted for neck LN biopsy and RML nodule biopsy.

The biopsy showed pictures compatible with Castleman's disease. Lab data also revealed IL-6 highly elevated (18.39 pg/ml). In addition, serum IgG4 showed 1460 mg/dL. However, some results, including HHV-8 (-) and immunohistologically IgG4/IgG > 40% were suggestive of idiopathic multicentric Castleman disease with abundant IgG4-positive cells. After prescription of Tocilizumab, a humanized anti-interleukin-6 receptor (IL-6R) monoclonal antibody, for 5 months, the patient was responsive to this treatment.

CASE RESULT:

Histopathological Findings:

[1] Bone marrow

Microscopically, it shows hypercellular marrow (about 80%) with decrease hemopoietic elements. Megakaryocyte count is 1-4/HPF without dysplasia. Most of marrow space is infiltrated by reactive plasma cells (Kappa and lumbda all positive) diagnostic of reactive plasma cell proliferation.

[2] Lymph node, neck, left

Microscopically, the sections show lymphoid follicles with hyperplastic germinal centers, proliferating vessels with lollipop-like feature and expansion of parafollicular areas by plasmacytoid

cells. The plasmacytoid cells are positive for CD138 and express both kappa and lambda light chain immunohistochemically. In addition, HHV-8 (-), IgG4/IgG > 40% are also noted.

[3] Lung, RML

Microscopically, the sections show diffuse infiltration of lymphoid (CD20+ B cells) and plasmacytoid cells which are positive for CD138 and express both kappa and lambda light chain immunohistochemically.

Pathological Diagnosis: idiopathic multicentric Castleman disease with abundant IgG4-positive cells

Differential diagnosis: IgG4-related disease

Discussion:

Human herpesvirus-8 (HHV-8)–negative, idiopathic multicentric Castleman disease (iMCD) is a rare and life-threatening disorder involving systemic inflammatory symptoms, polyclonal lymphoproliferation, cytopenias, and multiple organ system dysfunction caused by a cytokine storm often including interleukin-6. iMCD accounts for one third to one half of all cases of MCD and can occur in individuals of any age. Accurate diagnosis is challenging, because no standard diagnostic criteria or diagnostic biomarkers currently exist, and there is significant overlap with malignant, autoimmune, and infectious disorders.

Characteristic histopathologic features may include a constellation of regressed or hyperplastic germinal centers, follicular dendritic cell prominence, hypervascularization, and polytypic plasmacytosis. Laboratory and clinical Minor Criteria include elevated C-reactive protein or erythrocyte sedimentation rate, anemia, thrombocytopenia or thrombocytosis, hypoalbuminemia, renal dysfunction or proteinuria, polyclonal hypergammaglobulinemia, constitutional symptoms, hepatosplenomegaly, effusions or edema, eruptive cherry hemangiomatosis or violaceous papules, and lymphocytic interstitial pneumonitis. iMCD consensus diagnostic criteria will facilitate consistent diagnosis, appropriate treatment, and collaborative research.

Histopathologically, systemic IgG4-related disease and multicentric Castleman's disease are hard to distinguish. But serum C-reactive protein and interleukin-6 are useful to differentiate between them. In our case, both data are increased, suggestive of MCD. However, IgG4 immunohistologically staining showing IgG4/IgG > 40% were also seen. Idiopathic multicentric Castleman disease with abundant IgG4-positive cells was diagnosed. There were also some case reports presenting the similar characteristics to our cases.[3]

Interleukin-6 antagonist was approved to be useful in these cases. Not only the serum lab data including CRP and immunoglobulin G, but the clinical symptoms were also improved. In our patient, Tocilizumab, a humanized anti-interleukin-6 receptor (IL-6R) monoclonal antibody, was prescribed for 5 months already.

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Case number: 519

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Slide view: http://www.ivp.nchu.edu.tw/slide_view.php?id=1574

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CASE HISTORY

Signalment:

9-week-old chickens, obtained from a farm raising 20,000 breeders.

Clinical History:

The chickens revealed clinical signs including emaciation, depression, weakness and pale comb. The mortality of the disease was 0.2% (400/20,000). Four live chickens were sent to Animal Disease Diagnostic Center at NCHU for pathological examinations. The average body weight was 960 grams.

Gross Findings:

The thymus was atrophic. The bone marrow of femur became fatty and yellowish. Petechial hemorrhage in the epimysium of muscles and myocardial hemorrhage were also found. The liver was pale as well. In addition to these lesions, ventricular ulceration and petechial hemorrhage of cecal mucosa were also observed.

CASE RESULT

Histopathological Findings:

Marked hematopoietic cells in bone marrow vanished and were replaced by adipose tissue and stromal cells. A few round cells with dense nuclear and scant cytoplasm were infiltrating among adipose tissue. Some of these cells had a little basophilic cytoplasm. Serous atrophy of adipose tissue in bone marrow was noticed. The thymus cortex and medulla were atrophic. The number of cortical lymphocyte decreased and the density of Hassall's corpuscles increased. The stromal cells in the medulla proliferated, and there were some lymphoblast and lymphocytes aggregating in the medulla. Multifocal hemorrhages were found in the epicardium and myocardium of the heart.

In addition to the lesions of hematopoietic system, organs of alimentary system revealed some problems. The koilin membrane and epithelium of the gizzard were ulcerated. Coccidia were in the cytoplasm of cecal epithelial cells. Some of the intestinal epithelial cells were necrotic. The lamina propria of the cecum was mildly infiltrated by the lymphocytes and plasma cells.

Pathogenic bacteria identification:

Escherichia coli was isolated from the air sac, liver and spleen, and was identified by aerobic bacterial cultivation and 16s rRNA sequencing.

Pathogenic virus identification:

The genome of chicken anemia virus was detected by polymerase chain reaction in heart, liver, spleen, thymus, proventriculus and bursa.

Differential diagnosis:

Anemia:

- Coccidiosis
- Leukocytozoonosis
- Intoxication with high doses of sulfonamides or mycotoxins such as aflatoxin

Immunosuppression:

- Infectious bursal disease
- Marek's disease
- Reticuloendotheliosis

Diagnosis:

Chicken infectious anemia in chicken

Discussion:

Chicken infectious anemia (CIA) is caused by chicken anemia virus (CAV). CAV, a 25 nm, non-enveloped, icosahedral virus with a single-stranded, circular DNA genome, is the only member of the Gyrovirus genus of the Circoviridae family. CAV is ubiquitous in all major chicken-producing countries of the world. The chicken is the only known host for CAV, although antibodies have been detected in Japanese quail. CAV spreads both horizontally and vertically. Horizontal transmission most likely occurs through the fecal-oral route based on the presence of high concentrations of virus in the feces of chickens for five to seven weeks after infection. In addition, virus also can by shed by the respiratory route, and through infected feather follicle epithelium. Vertical transmission occurs when seronegative hens become infected and continues until neutralizing antibodies develop. CAV in semen is another source of vertical transmission.

In the experimental CAV virus infection, clinical signs generally develop after 10 to 14 days, and mortality begins at 12 to 14 days after infection. Under field conditions, congenitally infected chicks show clinical signs and increased mortality beginning at 10 to 12 days of age, with a peak at 17 to 24 days. In heavily infected flocks, there can be a second peak of mortality at 30 to 34 days, probably due to horizontal infection. In chickens six or more weeks of age, the etiologic significance of CAV infection associated with aplastic anemia-hemorrhagic syndromes has not been definitely established. The only specific clinical sign of CAV infection is anemia. characterized by hematocrit values ranging from 6% to 27%. The normal range is 29% to 35%. Affected birds are depressed and become pale. Blood smears often reveal anemia, leukopenia, or pancytopenia depending on the state of the disease. Blood may be watery and clot slowly. Weight gain failing is another common clinical sign. If mortality occurs, it generally does not exceed 30%. Secondary infections following immunosuppression cause more severe clinical signs.

Hemocytoblasts in the bone marrow and lymphoblasts in the thymus cortex are primarily involved in early infection, leading to a rapid depletion by apoptosis of these cells. Repopulation of the thymus with lymphocytes, repopulation of the bone marrow with proerythroblasts and promyelocytes, and recovery of hematopoietic activity, beginning around the 16^{th} day post infection, all appear to coincide with the beginning of antibody formation. These events result in complete recovery by 32 to 36 days after infection.

Thymic atrophy, sometimes resulting in an almost complete absence of thymic lobes, is the most consistent lesion. The thymic remnants may have a dark reddish color. Bone marrow atrophy is the most characteristic lesion seen and is best evaluated in the femur. Affected bone marrows become fatty and yellowish or pink. Bursal atrophy is less commonly associated with CIAV

infection. Hemorrhage in the proventricular mucosa and subcutaneous and muscular hemorrhages are sometimes associated with severe anemia. Histopathologic changes in anemic chicks have been characterized as panmyelophthisis and generalized lymphoid atrophy. Necrosis of residual small cell foci may occasionally be seen. Hematopoietic cells are replaced by adipose tissue or proliferating stroma cells. Severe lymphoid depletion is seen in the thymus, starting with the cortical lymphocytes, but the non-lymphoid leukocytes and stroma cells are not affected. Hydropic degeneration of residual cells and occasional necrotic foci are found in lesions.

Reference:

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Case Number: 520

Slide Number: 1004714

Slide View: http://www.ivp.nchu.edu.tw/slide_view.php?id=1584

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CASE HISTORY:

Signalment: A 65-year-old male, indigenous Taiwanese

Chief complaint:

Progressive memory impairment and incoherent speech, agitation after falling down injury for 2 weeks.

Clinical history:

This 65-year-old male, right handed, married patient with the history of pneumoconiosis for decades. His family described that he was relative well before. He suffered a falling down injury two weeks ago. Since then, his progressive memory impairment, incoherent speech, and repeat the same acting were noted. The condition is getting worsen and agitation, disorientation in recent days. He was sent to our MER for help. Brain MRI disclosed hypodense lesion over left frontal-temporal region without contrast enhancement. He was admitted for further evaluation and management.

Course and treatment

He received a series of examinations after admission. The CSF and blood culture did not show abnormal findings. However, patient's consciousness was getting worse (GCS: 14 to 11 to 8) within days. he underwent sterotactic biopsy for diagnosis on the 8th day after admission. Thrombocytopenia was noted at the same time. The pathology report showed intravascular B cell lymphoma. In the 12th day the patient had conscious loss (2T) and bilateral pupil dilation. The follow-up brain CT showed intracranial hemorrhage in frontal-temporal-parietal region with midline shift and brain stem compression. Patient decided to receive supportive treatment due to low platelet count and chose against advice discharge on 30th day of admission.

Lab data on admission:

Serum data: Albumin 2.6 g/dL; BUN 28 mg/dL; Creatine 1.5 mg/dL; Na 132 mmol/L; K 3.8 mmol/L; AST 23 U/L; ALT 10 U/L; CRP 18.69 mg/dL.

Blood routine data: WBC 10700/ul; Hb 10.2 g/dL; PLT 183000/ul; neutrophil 47%; monocyte 20%.

Immune studies (all date within normal range): RF 20 IU/ml; IgG 1800 IU/ml; IgM 138 IU/ml; IgA 688 IU/ml; C3 96.5 mg/dl; C4 15.3 mg/dl.

Radiology findings:

Brain MRI with contrast showed multiple discrete edematous lesions involving the left frontal lobe and genu of corpus callosum, right frontal and temporal lobes with mass effect. The differential diagnoses include infectious process with septic embolism, thromboembolism, brain metastases, gliomatosis cerebri and white matter demyelinating process and autoimmune disease.

Gross Findings:

The specimen submitted consisted of multiple small pieces of brain tissue measured up to 0.5 x 0.4 x 0.2 cm in size from sterotactic biopsy.

CASE RESULT:

Histopathological Findings:

Microscopically, the sections showed multiple foci of atypical lymphoid cells aggregated within intravascular space. These atypical lymphoid cells had medium to large nuclei with irregular nuclear contour and prominent nucleoli. Immunoprofile revealed tumor cells were positive for CD20, MUM1 and BCL-2, but negative for CD3, indicative of B-cell origin.

Pathological Diagnosis:

Intravascular diffuse large B cell lymphoma.

Differential diagnosis:

1. Intralymphatic histiocytosis.
2. Atypical intravascular CD30+ T cell proliferation.

Discussion:

Intravascular large B-cell lymphoma is a rare type of extranodal large B-cell lymphoma characterized by the proliferation of lymphoma cells within the lumina of small blood vessels, particularly capillaries, without an obvious extravascular tumor mass.

Median age at diagnosis is in the sixth to seventh decades, without sex predilection[1]. Two major patterns of clinical presentation have been described. A western form is characterized by symptoms related to the main organ involved, predominantly nerve system and skin[1, 2]. Other Asian form frequent present with multiorgan failure, hepatosplenomegaly, pancytopenia and hemophagocytic syndrome[3, 4]. Constitutional B symptoms including fever, night sweats, and weight loss are seen in most patients[2, 4].

The neoplastic lymphoid cells are mainly lodged in the lumina of small or intermediate vessels in many organs. The tumor cells are large with prominent nucleoli and frequent mitotic figures[2].

Minimal extravascular location of neoplastic cells may be seen. Malignant cells are occasionally detected in peripheral blood. Tumor cells express B-cell associated antigens, such as CD20 and CD79a[1]. The intravascular growth pattern has been hypothesized to secondary to a defect in homing receptors on the neoplastic cells, such as lack of CD29 and CD54 adhesion molecules[5].

Intravascular large B-cell lymphoma is aggressive and poor response to chemotherapy[1]. When the disease is restricted to the skin, the prognosis seems to be favorable[6].

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5. Ponzoni M, Arrigoni G, Gould VE, Del Curto B, Maggioni M, Scapinello A, et al. Lack of CD 29 (beta1 integrin) and CD 54 (ICAM-1) adhesion molecules in intravascular lymphomatosis. Hum Pathol 2000; 31: 220-226.
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中華民國比較病理學會章程

第一章　總則

第一條　本會定名為中華民國比較病理學會，英文名稱為 Chinese Society of Comparative Pathology (CSCP) (以下簡稱本會)。

第二條　本會依內政部人民團體法設立，為非營利目的之社會團體，以結合人類醫學與動物醫學資源，提倡比較病理學之研究與發展，交換研究教學心得，聯絡會員友誼及促進國際間比較醫學之交流為宗旨。

第三條　本會以全國行政區域為組織區域，會址設於主管機關所在地區，並得報經主管機關核准設主分支機構。前項分支機構組織簡則由理事會擬訂，報請主管機關核准後行之。會址及分支機構之地址於設置及變更時應報請主管機關核備。

第四條　本會之任務如左：

一、　提倡比較病理學之研究與發展。

二、　舉辦學術演講會、研討會及相關訓練課程。

三、　建立國內比較醫學相關資料庫。

四、　發行比較病理學相關刊物。

五、　促進國內、外比較醫學之交流。

六、　其他有關比較病埋學術發展之事項。

第五條　本會之主管機關為內政部。目的事業主管機關依章程所訂之宗旨與任務，主要為行政院衛生署及農業委員會，其目的事業應受各該事業主管機關之指導與監督。

第二章　會員

第六條　本會會員申請資格如下：

一、　一般會員：贊同本會宗旨，年滿二十歲，具有國內外大專院校(或同等學歷)生命科學及其它相關科系畢業資格或高職畢業從事生命科學相關工作滿兩年者。

二、　學生會員：贊同本會宗旨，在國內、外大專院校生命科學或其它相關科系肄業者 (檢附學生身份證明)。

三、　贊助會員：贊助本會工作之團體或個人。

四、　榮譽會員：凡對比較病理學術或會務之推展有特殊貢獻，經理事會提名並經會員大會通過者。

前項一、二、三項會員申請時應填具入會申請書，經一般會員二人之推薦，經理事會通過，並繳納會費。學生會員身份改變成一般會員時，得再補繳一般會員入會費之差額後，即成為一般會員，榮譽會員免繳入會費與常年會費。

第七條　一般會員有表決權、選舉權、被選舉與罷免權，每一會員為一權。贊助會員、學生會員與榮譽會員無前項權利。

第八條　會員有遵守本會章程、決議及繳納會費之義務。

第九條　會員有違反法令、章程或不遵守會員大會決議時，得經理事會決議，予以警告或停權處分，其危害團體情節重大者，得經會員大會決議予以除名。

第十條　會員喪失會員資格或經會員大會決議除名者，即為出會。

第十一條　會員得以書面敘明理由向本會聲明退會。但入會費與當年所應繳納的常年會費不得申請退費。

第三章　組織及職員

第十二條　本會以會員大會為最高權力機構。

第十三條　會員大會之職權如下：

一、 訂定與變更章程。

二、 選舉及罷免理事、監事。

三、 議決入會費、常年會費、事業費及會員捐款之方式。

四、 議決年度工作計畫、報告、預算及決算。

五、 議決會員之除名處置。

六、 議決財產之處分。

七、 議決本會之解散。

八、 議決與會員權利義務有關之其他重大事項。

前項第八款重大事項之範圍由理事會訂定之。

第十四條　本會置理事十五人，監事五人，由會員選舉之，分別成立理事會、監事會。

選舉前項理事、監事時，依計票情形得同時選出候補理事五人，候補監事一人，遇理事或監事出缺時，分別依序遞補之。

本屆理事會得提出下屆理事及監事候選人參考名單。

第十五條　理事會之職權如下：

一、 審定會員之資格。

二、 選舉及罷免常務理事及理事長。

三、 議決理事、常務理事及理事長之辭職。

四、 聘免工作人員。

五、 擬訂年度工作計畫、報告、預算及決算。

六、 其他應執行事項。

第十六條　理監事置常務理事五人，由理事互選之，並由理事就常務理事中選舉一人為理事長。

理事長對內綜理監督會議，對外代表本會，並擔任會員大會、理事會主席。

理事長因事不能執行職務時，應指定常務理事一人代理之，未指定或不能指定時，由常務理事互推一人代理之。

理事長或常務理事出缺時，應於一個月內補選之。

第十七條　監事會之職權如左：

一、監察理事會工作之執行。

二、審核年度決算。

三、選舉及罷免常務監事。

四、議決監事及常務監事之辭職。

五、其他應監察事項。

第十八條　監事會置常務監事一人，由監事互選之，監察日常會務，並擔任監事會主席。

常務監事因事不能執行職務時，應指定監事一人代理之，未指定或不能指定時，由監事互推一人代理之。監事會主席（常務監事）出缺時，應於一個月內補選之。

第十九條　理事、監事均為無給職，任期三年，連選得連任。理事長之

連任以一次為限。

第二十條　理事、監事有下列情事之一者，應即解任：
一、喪失會員資格。
二、因故辭職經理事會或監事會決議通過者。
三、被罷免或撤免者。
四、受停權處分期間逾任期二分之一者。

第二十一條　本會置祕書長一人，承理事長之命處理本會事務，令置其他工作人員若干人，由理事長提名經理事會通過後聘免之，並報主管機關備查。但祕書長之解聘應先報主管機關核備。
前項工作人員不得由選任之職員（理監事）擔任。
工作人員權責及分層負責事項由理事會令另定之。

第二十二條　本會得設各種委員會、小組或其它內部作業組織，其組織簡則由理事會擬定，報經主機關核備後施行，變更時亦同。

第二十三條　本會得由理事會聘請無給顧問若干人，其聘期與理事、監事之任期同。

第四章　會議

第二十四條　會員大會分定期會議與臨時會議兩種，由理事長召集，召集時除緊急事故之臨時會議外應於十五日前以書面通知之。定期會議每年召開一次，臨時會議於理事會過半數認為必要，或經會員五分之一以上之請，或監事會半數函請召集時召開之。

第二十五條　會員不能親自出席會員大會時，得以書面委託其他會員代理，每一會員以代理一人為限。

第二十六條　會員大會之決議，以出席人數過半之同意行之。但章程之訂定與變更、會員之除名、理事及監事之罷免、財產之處置、本會之解散及其他與會權利義務有關之重大事項應有出席人數三分之二以上同意。但本會如果辦理法人登後，章程之變更應以出席人數四分之三以上之同或全體會員三分之二以上書面之同意行之。

第二十七條　理事會及監事會至少每六個月各舉行會議一次，必要時得召開聯席會議或臨時會議。
前項會議召集時除臨時會議外。應於七日以以書面通知，會議之決議各以理事、監事過半數之出席，出席人較多數之同意行之。

第二十八條　理事應出席理事會議，監事應出席監事會議，不得委託出席；理事、監事連續二次無故缺席理事會、監事會者，視同辭職。

第五章　經費及會計

第二十九條　本會經費來源如下：
一、入會費：一般會員新台幣壹仟元，學生會員壹佰元，贊助會員伍仟元，於入會時繳納。
二、常年會費：一般會員新台幣壹仟元，學生會員壹佰元。
三、事業費。
四、會員捐款。

五、委託收益。
六、基金及其孳息。
七、其他收入。

第三十條　本會會計年度以國曆年為準，自每年一月一日起至十二月三十一日止。

第三十一條　本會每年於會計年度開始前二個月由理事會編造年度工作計劃、收支預算表、員工待遇表，提會員大會通過（會員大會因故未能如期召開者，先提理監事聯席會議通過），於會計年度開始前報主管機關核備，並於會計年度終了後二個月內由理事會編造年度工作報告、收支決算表、現金出納表、資產負債表、財產目錄及基金收支表，送監事會審核後，造具審核意見書送還理事會，提會員大會通過，於三月底前報主管機關核備（會員大會未能如期召開者，需先報主管機關備查）。

第三十二條　本會解散後，剩餘財產歸屬所在地之地方自治團體或主管機關指定之機關團體所有。

第三十三條　本章程未規定事項，悉依有關法令規定辦理。

第三十四條　本章程經大會通過，報經主管機關核備後施行，變更時亦同。

第三十五條　本章程經本會民國八十五年二月四日第一屆第一次會員大會通過，並報經內政部 85 年 3 月 14 日台(85)內社字第 8507009 號函准予備查。

中華民國比較病理學會 第八屆理監事簡歷冊

序號	職別	姓名	性別	學歷	經歷	現任本職
1	理事長	許永祥	男	國立台大醫學院病理研究所碩士	台大醫院病理科住院醫師	慈濟醫院病理科主任教授
2	常務理事	劉振軒	男	美國加州大學戴維斯校區比較病理學博士	國立臺灣大學獸醫專業學院院長	台灣大學分子暨比較病理生物學研究所教授
3	常務理事	施洽雯	男	國立國防醫學院病理研究所	中山醫學院病理科副教授	羅東博愛醫院病理科主任
4	常務理事	鄭謙仁	男	美國北卡羅萊納州立大學博士	台灣大學獸醫學系教授兼所長	台灣大學獸醫學系教授
5	常務理事	邱慧英	女	國立台大獸醫專業學院博士	台灣養豬科學研究所	國立中興大學獸醫病理生物學研究所 助理教授
6	理事	朱旆億	男	國立臺灣大學醫學系 國立臺灣大學獸醫專業學院博士	輔仁大學醫學系兼任助理教授	彰化秀傳紀念醫院病理科主任
7	理事	李進成	男	英國倫敦大學神經病理博士	長庚醫院內科醫師	新光吳火獅紀念醫院病理檢驗科醫師
8	理事	阮正雄	男	日本國立岡山大學大學院 醫齒藥總合研究科博士	台北醫學大學副教授兼細胞學中心主任	輔英科技大學附設醫院
9	理事	林永和	男	國立台大病理研究所碩士	台北醫學院病理科講師	台北醫學院病理科副教授
10	理事	祝志平	男	台大病理研究所	台北醫學院講師	彰化秀傳紀念醫院病理部

11	理事	賴銘淙	男	清華大學生命科學院博士	彰濱秀傳紀念醫院病理科主任	衛生福利部臺中醫院病理學科主任
12	理事	賈敏原	男	國立臺灣大學獸醫專業學院 博士	國衛院研究員	國立中興大學獸醫系助理教授
13	理事	張俊梁	男	國防醫學院醫學科學研究所博士		國防醫學院兼任助理教授
14	理事	陳姿妤	女	國立中興大學獸醫病理學研究所碩士	生技中心研究員	國家實驗動物中心病理獸醫師
15	理事	鄭明芳	男	國立陽明大學口腔生物研究所博士	國防醫學院醫學系病理學科暨病理及寄生蟲研究所	805 醫院病理主任
16	常務監事	廖俊旺	男	國立台灣大學獸醫學研究所博士	農業藥物毒物試驗所應用毒理組副研究員	國立中興大學獸醫病理生物學研究所教授
17	監事	蔡慧玲	女	台灣女科技人學會		監事
18	監事	楊俊宏	男	長庚大學生物醫學研究所博士		農委會農業藥物毒物試驗所
19	監事	簡耀君	男	國立臺灣大學獸醫學研究所獸醫學碩士	長青動物醫院病理部主任	長青動物醫院病理部主任
20	監事	彭奕仁	男	國防醫學院醫學科學研究所博士班學生		三軍總醫院病理部主治醫師
21	秘書長	張惠雯	女	國立臺灣大學獸醫專業學院 博士		台灣大學分子暨比較病理生物學研究所 助理教授

中華民國比較病理學會

基金收支表

中華民國 106 年 1 月 1 日至 106 年 12 月 31 日止

單位：新臺幣(元)

收入		支出	
科目名稱	金額	科目名稱	金額
準備基金	10,400	準備基金	0
歷年累存	10,400		
本年度提撥	2,400		
		結餘	12,800

理事長: 常務監事: 祕書長: 會計:

說明:本會暫無基金專戶，於年底時依盈餘情形提列為不可動支的準備基金,於活期存簿中(合作金庫)，目前歷年累存之準備基金為壹萬兩仟捌百元。

中華民國比較病理學會

現金出納表

中華民國 106 年 1 月 1 日至 106 年 12 月 31 日止

單位：新臺幣(元)

收入		支出	
科目名稱	金額	科目名稱	金額
上期結存	86,540	本期支出	53,676
本期收入	101,748	本期結存	134,612
合計	188,288	合計	188,288

理事長:　　常務監事:　　祕書長:　　會計:

中華民國比較病理學會

資產負債表

中華民國 106 年 12 月 31 日　　單位：新臺幣(元)

資　　產		負債 基金 暨　餘絀	
歷年歲末累計結餘	86,540	合作金庫活存	84,895
提撥準備基金	0		
106 年度餘絀	48,072	現金	49,717
合　計	134,612	合 計	134,612

理事長:　　常務監事:　　秘書長:　　會計:

中華民國比較病理學會

收支決算表

中華民國 106 年 1 月 1 日至 106 年 12 月 31 日

單位：新臺幣(元)

科目				決算數	預算數	決算與預算比較數		說明
款	項	目	名稱			增加	減少	
1			本會經費收入	101,748	58,500	43,248		
	1		入會費	11,600	4,000	7,600		一般會員 11 人，學生 8 人
	2		常年會費 （三年內）	54,100	30,000	24,100		一般會員 39 人，學生 22 人
	3		贊助會費	32,000	20,000	12,000		廠商捐款
	4		利息收入	48	80		32	
	5		其他收入	4,000	4,420		420	單次報名
2			本會經費支出	53,676	58,500		4,824	
	1		人事費	6,000	8,000		2,000	
		1	兼職人員車馬費	0	8,000		8,000	
		2	其它人事費	6,000	0	6,000	0	專題演講者車馬費(共 3 位)
	2		辦公費	11,634	14,000		2,366	
		1	印刷費	9,488	12,000		2,512	印刷第 69、70 及 71 次會議手冊
		2	旅運費	0	0		0	
		3	郵電費	546	2,000		1454	
		4	公共關係費	1,600	0	1,600		
	3		業務費	34,023	25,800	8,223		
		1	會議費	34,023	25,800	8,223		
	4		雜費支出（獸醫再教育登錄）	2,019	10,000		11,981	
	5		提撥基金	2,400	700		700	
3			本期餘絀	48,072	0			

理事長：　常務監事：　秘書長：　會計：

中華民國比較病理學會

107 年度工作計劃

一、會務

1. 徵求會員

持續進行學會推廣及會員召募，擴大會員陣容，

2. 整理會藉與清查會費

i. 更新整理會藉資料，並製作會員通訊錄

ii. 清查會員繳費狀況，進行催繳，缺繳三年以上徹底實行停權

3. 召開會議

召開會員大會一次，審查 107 年度工作報告與經費收支狀況，研議 107 年度之工作計劃及預算

4. 學術活動

持續辦理三次研討會，並邀請國內外專家學者做學術性的演講

二、業務

1. 繳納會費

2. 文書處理

整理與更新會員信箱，刪除無效信箱

3. 病例資料處理

掃描研討會議病例切片，供會員研究教學使用

4. 研討會活動照片、會員狀態及網頁維護更新

5. 進行獸醫再教育學分申請及協助會員學分認證

中華民國比較病理學會
收支預算表

中華民國 107 年 1 月 1 日至 107 年 12 月 31 日　　單位：新臺幣(元)

科目				本年度預算數	上年度預算數	本年度與上年度預算比較數		說明
款	項	目	名稱			增加	減少	
1			本會經費收入	85,080	58,500	26,580		
	1		入會費	6,000	4,000	2,000		學生入會 100 元;一般會員 1000 元
	2		常年會費	35,000	30,000	5,000		學生會員 100 元;一般會員 1000 元
	3		贊助會費	40,000	20,000	20,000		贊助廠商 5000 元
	4		利息收入	80	80			
	5		其他收入	4,000	4,420		420	
2			本會經費支出	65,880	58,500	7,380		
	1		人事費	6,000	8,000		2,000	
		1	兼職人員車馬費	0	8,000		8,000	
		2	其他人事費	6,000		6,000		講師費 2000 元
	2		辦公費	15,380	14,000	1,380		
		1	印刷費	14,080	12,000	2,080		會議手冊印製
		2	旅運費	300	0	300		
		3	郵電費	1,000	2,000		1000	病例切片郵寄
		4	公共關係費	0	0			
	3		業務費	35,800	25,800	10,000		
		1	會議費	35,800	25,800	10,000		
	4		雜費支出	8,000	10,000		2,000	
	5		提撥基金	0	700	300		如有盈餘，得依規定提列 5%以上
3			本期餘絀	19,200	0			

理事長：許永祥　　常務監事：廖俊旺　　秘書長：[illegible]　　會計：張佳瑜

數位組織切片資料庫

How-To Access Comparative Pathology Virtual Slides
Hosted at the Web Library in NTU Vet Med Digital Pathology Lab
(中華民國比較病理學會數位式組織切片影像資料庫)

Comparative Pathology glass slides are now digitalized and accessible to all participants through the internet and a web browser (see below for detail instruction).

1. Please make sure that your web browser (e.g. Internet Explorer, Firefox or Safari) is equipped with "flash player." If not, it can be added from http://www.adobe.com/products/flashplayer/ for free.

2. Please go to the Chinese Society of Comparative Pathology web site at http://www.ivp.nchu.edu.tw/cscp/

3.Choose the slide images (e.g. 63rd CSCP)

4. Pick any case you'd like to read (e.g. case 435-440)

中華民國比較病理學會
第一次至第七十次比較病理學研討會病例分類一覽表

分類	病例編號	會議場次	診　　斷	動物別	提　供　單　位
腫瘤	1.	1	Myxoma	Dog	美國紐約動物醫學中心
	2.	1	Chordoma	Ferret	美國紐約動物醫學中心
	3.	1	Ependymoblastoma	Human	長庚紀念醫院
	8.	2	Synovial sarcoma	Pigeon	美國紐約動物醫學中心
	18.	3	Malignant lymphoma	Human	長庚紀念醫院
	19.	3	Malignant lymphoma	Wistar rat	國家實驗動物繁殖及研究中心
	24.	3	Metastatic thyroid carcinoma	Human	省立新竹醫院
	25.	3	Chordoma	Human	新光吳火獅紀念醫院
	34.	4	Interstitial cell tumor	Dog	中興大學獸醫學系
	35.	4	Carcinoid tumor	Human	長庚紀念醫院
	36.	4	Hepatic carcinoid	Siamese cat	美國紐約動物醫學中心
	38.	6	Pheochromocytoma	Ferret	美國紐約動物醫學中心
	39.	6	Extra adrenal pheochromocytoma	Human	新光吳火獅紀念醫院
	40.	6	Mammary gland fibroadenoma	Rat	國家實驗動物繁殖及研究中心
	41.	6	Fibroadenoma	Human	省立豐原醫院
	42.	6	Canine benign mixed type mammary gland tumor	Pointer bitch	中興大學獸醫學系
	43.	6	Phyllodes tumor	Human	台中榮民總醫院
	44.	6	Canine oral papilloma	Dog	台灣大學獸醫學系
	45.	6	Squamous cell papilloma	Human	中國醫藥學院
	47.	7	1. Lung: metastatic carcinoma associated with cryptococcal infection. 2. Liver: metastatic carcinoma. 3. Adrenal gland, right: carcinoma (primary)	Human	三軍總醫院
	56.	8	Gastrointestinal stromal tumor	Human	台中榮民總醫院
	59.	8	Colonic adenocarcinoma	Dog	美國紐約動物醫學中心
	62.	8	Submucosal leiomyoma of stomach	Human	頭份為恭紀念醫院
	64.	8	1. Adenocarcinoma of sigmoid colon 2. Old schistosomiasis of rectum	Human	省立新竹醫院
	71.	9	Myelolipoma	Human	台北耕莘醫院
	72.	9	Reticulum cell sarcoma	Mouse	國家實驗動物繁殖及研究中心

腫瘤	73.	9	Hepatocellular carcinoma	Human	新光吳火獅紀念醫院
	74.	9	Hepatocellular carcinoma induced by aflatoxin B1	Wistar rats	台灣省農業藥物毒物試驗所
		10	Angiomyolipoma	Human	羅東博愛醫院
		10	Inverted papilloma of prostatic urethra	Human	省立新竹醫院
		10	Nephrogenic adenoma	Human	國泰醫院
		10	Multiple myeloma with systemic amyloidosis	Human	佛教慈濟綜合醫院
		10	Squamous cell carcinoma of renal pelvis and calyces with extension to the ureter	Human	台北病理中心
		10	Fibroepithelial polyp of the ureter	Human	台北耕莘醫院
	90.	10	Clear cell sarcoma of kidney	Human	台北醫學院
	93.	11	Mammary gland adenocarcinoma, complex type , with chondromucinous differentiation	Dog	台灣大學獸醫學系
	94.	11	1. Breast, left, modified radical mastectomy, showing papillary carcinoma, invasive 2. Nipple, left, modified radical mastectomy, papillary carcinoma, invasive 3. Lymph node, axillary, left, lymphadenectomy, palillary carcinoma, metaststic	Human	羅東聖母醫院
	95.	11	Transmissible venereal tumor	Dog	中興大學獸醫學系
	96.	11	Malignant lymphoma, large cell type, diffuse, B-cell phenotype	Human	彰化基督教醫院
	97.	11	Carcinosarcomas	Tiger	台灣養豬科學研究所
	98.	11	Mucinous carcinoma with intraductal carcinoma	Human	省立豐原醫院
	99.	11	Mammary gland adenocarcinoma, type B, with pulmonary metastasis, BALB/cBYJ mouse	Mouse	國家實驗動物繁殖及研究中心
	100.	11	Malignant fibrous histiocytoma and paraffinoma	Human	中國醫藥學院
	102.	11	Pleomorphic adenoma (benign mixed tumor)	Human	佛教慈濟綜合醫院
腫瘤	103.	13	Atypical central neurocytoma	Human	新光吳火獅紀念醫院
		13	Cardiac schwannoma	SD rat	國家實驗動物繁殖及研究中心
		13	Desmoplastic infantile ganglioglioma	Human	高雄醫學院

		13	1.Primary cerebral malignant lymphoma 2.Acquired immune deficiency syndrome	Human	台北市立仁愛醫院
		13	Schwannoma	Human	三軍總醫院
		13	Osteosarcoma	Dog	美國紐約 動物醫學中心
		14	Mixed germ-cell stromal tumor, mixed sertoli cell and seminoma-like cell tumor	Dog	美國紐約 動物醫學中心
		14	Krukenberg's Tumor	Human	台北病理中心
		14	Primary insular carcinoid tumor arising from cystic teratoma of ovary.	Human	花蓮慈濟綜合醫院
		14	Polypoid adenomyoma	Human	大甲李綜合醫院
		14	Gonadal stromal tumor	Human	耕莘醫院
		14	Gestational choriocarcinoma	Human	彰化基督教醫院
		14	Ovarian granulosa cell tumor	Horse	中興大學獸醫學系
		15	Kaposi's sarcoma	Human	華濟醫院
		15	Basal cell carcinoma (BCC)	Human	羅東聖母醫院
		15	Transmissible venereal tumor	Dog	臺灣大學獸醫學系
		17	Canine Glioblastoma Multiforme in Cerebellopontine Angle	Dog	中興大學獸醫病理研究所
	143	18	Osteosarcoma associated with metallic implants	Dog	紐約動物醫學中心
	144	18	Radiation-induced osteogenic sarcoma	Human	花蓮慈濟綜合醫院
	145	18	Osteosarcoma, osteogenic	Dog	臺灣大學獸醫學系
	146	18	Pleomorphic rhabdomyosarcoma	Human	行政院衛生署新竹醫院
	147	18	Papillary Mesothelioma of pericardium	Leopard	屏東科大學獸醫學系
	148	18	Cystic ameloblastoma	Human	台北醫學院
	149	18	Giant cell tumor of bone	Canine	中興大學獸醫學院
	150	18	Desmoplastic small round cell tumor (DSRCT)	Human	華濟醫院
	152	18	Hepatocellular carcinoma	Human	羅東聖母醫院
	158	20	Hemangiopericytoma	Human	羅東聖母醫院
	160	20	Cardiac fibroma	Human	高雄醫學大學病理學科
	166	21	Nephroblastoma	Rabbit	紐約動物醫學中心
	168	21	Nephroblastoma	Pig	台灣動物科技研究所
腫瘤	169	21	Nephroblastoma with rhabdomyoblastic differentiation	Human	高雄醫學大學病理科
	172	21	Spindle cell sarcoma	Human	羅東聖母醫院
	174	21	Juxtaglomerular cell tumor	Human	新光醫院病理檢驗科
	190	27	Angiosarcoma	Human	高雄醫學大學病理學科

	192	27	Cardiac myxoma	Human	彰化基督教醫院病理科
	194	27	Kasabach-Merrit syndrome	Human	慈濟醫院病理科
	195	27	Metastatic hepatocellular carcinoma, right atrium	Human	新光醫院病理科
	197	27	Papillary fibroelastoma of aortic valve	Human	新光醫院病理科
	198	27	Extraplacental chorioangioma	Human	耕莘醫院病理科
	208	30	Granulocytic sarcoma (Chloroma) of uterine cervix	Human	高雄醫學大學病理學科
	210	30	Primary non-Hodgkin's lymphoma of bone, diffuse large B cell, right humerus	Human	彰化基督教醫院病理科
	213	30	Lymphoma, multi-centric type	Dog	中興大學獸醫系
	214	30	CD30 (Ki-1)-postitive anaplastic large cell lymphoma (ALCL)	Human	新光醫院病理科
	215	30	Lymphoma, mixed type	Koala	台灣大學獸醫學系
	217	30	Mucosal associated lymphoid tissue (MALT) lymphoma, small intestine	Cat	臺灣大學獸醫學研究所
		31	Nasal type NK/T cell lymphoma	Human	高雄醫學大學病理科
		31	Acquired immunodeficiency syndrome (AIDS)with disseminated Kaposi's sarcoma	Human	慈濟醫院病理科
		32	Epithelioid sarcoma	Human	彰化基督教醫院病理科
		32	Cutaneous B cell lymphoma, eyelid , bilateral	Human	羅東聖母醫院病理科
		32	Extramammary Paget's disease (EMPD) of the scrotum	Human	萬芳北醫皮膚科病理科
		32	Skin, back, excision, CD30+diffuse large B cell lymphoma, Soft tissue, leg , side not stated, excision, vascular leiomyoma	Human	高雄醫學大學附設醫院病理科
		34	Malignant melanoma, metastasis to intra-abdominal cavity	Human	財團法人天主教耕莘醫院病理科
腫瘤		34	Vaccine-associated rhabdomyosarcoma	Cat	台灣大學獸醫學系
		34	1. Pleura: fibrous plaque 2. Lung: adenocarcinoma 3. Brain: metastatic adenocarcinoma	Human	高雄醫學大學附設 中和醫院病理科
		34	1. Neurofibromatosis, type I 2. Malignant peripheral nerve sheath tumor (MPNST)	Human	花蓮慈濟醫院病理科
		35	Glioblastoma multiforme	Human	羅東聖母醫院

		35	Pineoblastoma	Wistar rat	綠色四季
		35	Chordoid meningioma	Human	高醫病理科
		35	Infiltrating lobular carcinoma of left breast with meningeal carcinomatosis and brain metastasis	Human	花蓮慈濟醫院病理科
		35	Microcystic Meningioma.	Human	耕莘醫院病理科
		36	Well-differentiated fetal adenocarcinoma without lymph node metastasis	Human	新光吳火獅紀念醫院
		36	Adenocarcinoma of lung.	Human	羅東聖母醫院
		36	Renal cell carcinoma	Canine	國立台灣大學獸醫學系獸醫學研究所
		36	Clear cell variant of squamous cell carcinoma, lung	Human	高雄醫學大學附設中和醫院病理科
		37	Metastatic adrenal cortical carcinoma	Human	耕莘醫院病理科
		37	Hashimoto's thyroiditis with diffuse large B cell lymphoma and papillary carcinoma	Human	高雄醫學大學附設中和醫院病理科
		38	Medullar thyroid carcinoma	Canine	臺灣大學獸醫學系
		39	Merkel cell carcinoma	Human	羅東博愛醫院
		39	Cholangiocarcinoma	Human	耕莘醫院病理科
		39	Sarcomatoid carcinoma of renal pelvis	Human	花蓮慈濟醫院病理科
		39	Mammary Carcinoma	Canine	中興大學獸醫學系
		39	Metastatic prostatic adenocarcinoma	Human	耕莘醫院病理科
		39	Malignant canine peripheral nerve sheath tumors	Canine	臺灣大學獸醫學系
		39	Sarcomatoid carcinoma, lung	Human	羅東聖母醫院
		40	Vertebra,T12,laminectomy, metastatic adenoid cystic carcinoma	Human	彰化基督教醫院
腫瘤		40	rhabdomyosarcoma	Canine	臺灣大學獸醫學系
		40	Fetal rhabdomyosarcoma	SD Rat	中興大學獸醫學系
		40	Adenocarcinoma, metastatic, iris, eye	Human	高雄醫學大學
		40	Axillary lymph node metastasis from an occult breast cancer	Human	羅東博愛醫院
		40	Hepatocellular carcinoma	Human	國軍桃園總醫院
		40	Feline diffuse iris melanoma	Faline	中興大學獸醫學系
		40	Metastatic malignant melanoma in the brain and inguinal lymph node	Human	花蓮慈濟醫院病理科
		41	Tonsil Angiosarcoma	Human	羅東博愛醫院

		41	Malignant mixed mullerian tumor	Human	耕莘醫院病理科
		41	Renal cell tumor	Rat	中興大學獸醫學系
		41	Multiple Myeloma	Human	花蓮慈濟醫院病理科
		41	Myopericytoma	Human	新光吳火獅紀念醫院
		41	Extramedullary plasmacytoma with amyloidosis	Canine	臺灣大學獸醫學系
		42	Metastatic follicular carcinoma	Human	羅東聖母醫院病理科
		42	Primitive neuroectodermal tumor (PNET), T-spine.	Human	羅東博愛醫院病理科
		42	Hemangioendothelioma of bone	Human	花蓮慈濟醫院病理科
		42	Malignant tumor with perivascular epithelioid differentiation, favored malignant PEComa	Human	彰化基督教醫院
		43	Mucin-producing cholangiocarcinoma	Human	基隆長庚醫院
		43	Cutaneous epitheliotropic lymphoma	Canine	臺灣大學獸醫專業學院
		43	Cholangiocarcinoma	Felis Lynx	臺灣大學獸醫專業學院
		43	Lymphoma	Canine	臺灣大學獸醫專業學院
		43	Solitary fibrous tumor	Human	彰化基督教醫院
		43	Multiple sarcoma	Canine	臺灣大學獸醫專業學院
		44	Malignant solitary fibrous tumor of pleura	Human	佛教慈濟綜合醫院暨慈濟大學
		44	Ectopic thymic carcinoma	Human	彰濱秀傳紀念醫院病理科
		44	Medullary carcinoma of the right lobe of thyroid	Human	彰化基督教醫院病理科
		44	Thyroid carcinosarcoma with cartilage and osteoid formation	Canine	臺灣大學獸醫專業學院
		44	Lymphocytic leukemia/lymphoma	Koala	臺灣大學獸醫專業學院
		45	Neuroendocrine carcinoma of liver	Human	佛教慈濟綜合醫院暨慈濟大學
		45	Parachordoma	Human	羅東博愛醫院病理科
腫瘤		45	Carcinoma expleomorphic adenoma, submandibular gland	Human	天主教耕莘醫院病理科
		45	Melanoma, tongue	Canine	國立臺灣大學獸醫專業學院
		45	Renal cell carcinoma, papillary type	Canine	國立臺灣大學獸醫專業學院
	323	46	Metastatic papillary serous cystadenocarcinoma, abdomen	Human	國軍桃園總醫院
	324	46	Malignant gastrointestinal stromal tumor	Human	天主教耕莘醫院

腫瘤	329	47	Sclerosing stromal tumor	Human	彰化基督教醫院
	330	47	Pheochromocytoma	Human	天主教耕莘醫院
	334	48	Metastatic infiltrating ductal carcinoma, liver	Human	佛教慈濟綜合醫院
	335	48	Adenoid cystic carcinoma, grade II, Rt breast	Human	天主教耕莘醫院
	336	48	Malignant lymphoma, diffuse, large B-cell, right neck	Human	林新醫院
	337	48	Pulmonary carcinoma, multicentric	Dog	國立臺灣大學 獸醫專業學院
	338	48	Malignant melanoma, multiple organs metastasis	Rabbit	國立中興大學獸醫學院
	340	49	Mucinous-producing urothelial-type adenocarcinoma of prostate	Human	天主教耕莘醫院
	342	49	Plexiform fibromyxoma	Human	彰化基督教醫院
	343	49	Malignant epithelioid trophoblastic tumor	Human	佛教慈濟綜合醫院
	344	49	Epithelioid sarcoma	Human	林新醫院
	346	49	Transmissible venereal tumor	Dog	國立臺灣大學獸醫專業學院
	347	50	Ewing's sarcoma (PNET/ES tumor)	Human	天主教耕莘醫院病理科
	348	50	Malignant peripheral nerve sheath tumor, epithelioid type	Human	林新醫院病理科
	349	50	Low grade fibromyxoid sarcoma	Human	高雄醫學大學附設 中和紀念醫院病理科
	351	50	Orbital embryonal rhabdomyosarcoma	Dog	Gifu University, Japan (岐阜大学)
	354	50	Granular cell tumor	Dog	國立臺灣大學 獸醫專業學院
	356	50	Malignant neoplasm of unknown origin, cerebrum	Dog	國立臺灣大學 獸醫專業學院
	357	51	Small cell Carcinoma, Urinary bladder	Human	天主教耕莘醫院
	364	51	Perivascular epithelioid cell tumor, in favor of lymphangiomyomatosi	Human	高雄醫學大學附設中和紀念醫院病理科
	365	52	Angiosarcoma, skin (mastectomy)	Human	天主教耕莘醫院病理科
	366	52	Rhabdomyoma (Purkinjeoma), heart	Swine	屏東縣家畜疾病防治所
	368	52	Langerhans cell sarcoma, lung	Human	高雄醫學大學附設中和紀念醫院病理科
	369	52	Biliary cystadenocarcinoma, liver	Camel	國立屏東科技大學獸醫教學醫院病理科
	371	52	Malignant melanoma, nasal cavity	Human	羅東博愛醫院病理科
	373	53	Malignant giant cell tumor of tendon sheath	Human	天主教耕莘醫院病理科

腫瘤	376	53	Malignant mesothelioma of tunica vaginalis	Golden hamster	中興大學獸醫病理生物學研究所
	377	53	Perivascular Epithelioid Cell Tumor (PEComa) of the uterus	Human	彰化基督教醫院病理部
	378	53	Medullary carcinoma	Human	高雄醫學大學病理部
	389	55	Mantle cell lymphoma involving ascending colon, cecum, ileum, appendix and regional lymph nodes with hemorrhagic necrosis in the colon and leukemic change.	Human	奇美醫院病理部
	390	55	Pulmonary Squamous Cells Carcinoma of a Canine	Dog	國立屏東科技大學獸醫教學醫院病理科
	391	55	Squamous cell carcinoma, lymphoepithelioma-like type	Human	高醫附設醫院病理科
	393	55	Malignant peripheral nerve sheath tumor (MPNST), subcutis, canine.	Dog	中興大學獸醫學系
	394	55	Desmoplastic malignant melanoma (mimic malignant peripheral nerve sheath tumor)	Human	中山醫學大學醫學系病理學科暨附設醫院病理科
	397	56	Atypical meningioma	Human	奇美醫院病理科
	401	57	Lymph nodes, excision - Hodgkin's lymphoma, mixed cellularity	Human	天主教耕莘醫院
	402	57	1. Leukemia, nonlymphoid, granulocytic, involving bone marrow, spleen, liver, heart, lungs, lymph nodes, kidney, hardian gland, duodenum and pancreas. 2. Pinworm infestation, moderate, large intestines. 3. Fibrosis, focal, myocardium.	Mouse	國家實驗動物中心
	403	57	Non-secretory multiple myeloma with systemic amyloidosis	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	404	57	1. Hepatocellular adenocarcinoma, multifocal, severe, liver 2. Hemorrhage, moderate, acute, body cavity 3. Bumble foot, focal, mild, chronic, food pad 4. cyst and atherosclerosis, chronic, testis	Goose	國立中興大學獸醫病理生物學研究所
	406	57	Castleman's disease	Human	羅東博愛醫院
	407	58	Hepatoid adenocarcinoma of colon with multiple liver metastases	Human	羅東博愛醫院
	408	58	Cardiac and pulmonary melanoma	Pig	國立中興大學獸醫病理生物學研究所
	409	58	Double Tumors: (1) small cell carcinoma of lung	Human	佛教慈濟綜合醫院暨慈濟大學病理科

		(2) Hodgkin's lymphoma, mixed cellularity type. Acrokeratosis paraneoplastica		
410	58	Von Hippel–Lindau disease	Human	奇美醫院病理部
411	58	Multiple neoplasia	Tiger	國立屏東科技大學獸醫教學醫院病理科
412	58	Hepatocellular carcinoma and multiple myeloma	Human	中山醫學大學醫學系病理學科暨附設醫院病理科
413	59	DEN plus AAF carcinogens induced hepatic tumor in male rats	Rat	中興大學獸醫病理生物學研究所
417	59	Alveolar soft part sarcoma	Human	高雄醫學大學附設 中和紀念醫院病理科
418	60	Seminoma associated with supernumerary testicles	Human	羅東博愛醫院
422	61	Retinoblastoma in a baby girl	Human	彰化基督教醫院
423	61	Colloid goiter in a female Radiated tortoise (Astrochelys radiata)	Tortoise	台灣大學獸醫專業學院分子暨比較病理生物學研究所
424	61	Lymphoepithelial carcinoma in a women	Human	羅東博愛醫院
425	61	Histiocytic sarcoma in a SJL/J mouse	mouse	國家實驗動物中心
428	62	Maligant lymphoma, diffuse large B-cell (DLBCL) in a women	Human	國軍桃園總醫院病理檢驗部
429	62	Immune reconstitution inflammatory syndrome (IRIS)-associated Kaposi's sarcoma in a man	Human	花蓮慈濟醫院
430	62	Mammary adenocarcinoma, tubular form in a female feline	Cat	中興大學獸醫病理生物學研究所
433	62	Rhabdomyosarcoma, retroperitoneal cavity in a female mouse	Mouse	國家實驗動物中心
434	62	Malignant pheochromocytoma with pleural metastasis in a man	Human	天主教聖馬爾定醫院病理科
436	63	Primary non-Hodgkins lymphoma of terminal ileum	Human	國軍桃園總醫院病理檢驗部
438	63	Ectopic thyroid gland tumor	Beagle	台灣大學獸醫專業學院分子暨比較病理生物學研究所
440	63	Hepatocellular cell carcinoma Squamous cell carcinoma	Human	天主教聖馬爾定醫院口腔顎面外科
442	64	Large B cell lymphoma in a man	Human	羅東博愛醫院

腫瘤	444	64	Olfactory neuroblastoma in a female cat	Cat	台灣大學獸醫專業學院分子暨比較病理生物學研究所
	445	64	Oligodendroglioma in a man	Human	國軍桃園總醫院病理檢驗部
	447	64	Ameloblastoma of mandible in a man	Human	天主教聖馬爾定醫院口腔顎面外科
	448	65	EBV associated extranodal NK / T-cell lymphoma, nasal type	Human	羅東博愛醫院
	451	65	Mouse, subcutaneously mass – exocrine pancreatic adenocarcinoma, AsPC-1 cells, human origin, heterotopical model	Mouse	國家實驗動物中心
	452	65	1. Extranodal NK/T-cell lymphoma, nasal type 2. 2. Regional lymph nodes and omentum are involved.	Human	台中醫院
	457	66	Metastatic squamous cell carcinoma (SCC)	Horse	台灣大學獸醫專業學院分子暨比較病理生物學研究所
	459	66	Squamous intraepithelial lesion (SIL)	Human	高雄醫學大學附設醫院病理部
	460	66	Subcutaneous liposarcoma and uterine endometrial stromal sarcoma	African hedgehog	中興大學獸醫病理生物學研究所
	463	67	Splenic undifferentiated pleomorphic sarcoma in a Djungarian hamster	Hamster	國立中興大學獸醫教學醫院鳥禽與野生動物科
	465	67	Plasmacytoid urothelial carcinoma	Dog	國立台灣大學獸醫專業學院分子暨比較病理生物學研究所
	467	67	1.Poorly differentiated hemangiosarcoma in face 2.Squamous cell carcinoma in ear	Civet	農委會特有生物研究保育中心
	473	68	Simple mammary gland adenocarcinoma	Guinea pig	中興大學獸醫病理生物學研究所
	476	69	Mediastinum dedifferentiated liposarcoma	Human	羅東博愛醫院
	477	69	Uterus adenosarcoma	Hedgehog	中興大學獸醫病理生物學研究所
	478	69	Primary pericardial mesothelioma in a woman	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	479	69	Pulmonary solid adenocarcinoma	Dog	國立台灣大學獸醫專業學院分子暨比較病理生物學研究所

481	70	Paraganglioma of liver	Human	佛教慈濟綜合醫院暨慈濟大學病理科
482	70	Adenocarcinoma, transmural, recurrent, with desmoplasia and metastasis to regional lymph node, jejunum and ileocecal junction Mast cell tumor, moderately-differentiated, multiple, jejunal and ileocecal masses	Cat	國立台灣大學獸醫專業學院分子暨比較病理生物學研究所
483	70	Solitary fibrous tumor of pelvis	Human	羅東博愛醫院病理科
484	70	Chronic lymphocytic leukemia, with systemic dissemination, bone marrow, intestine, generalized lymph node, spleen, liver, kidney and lung	Dog	國立台灣大學獸醫專業學院分子暨比較病理生物學研究所
485	70	Intestine, large, colon, ascending, --- Carcinoma, poorly differentiated (pT4aN1b). (ADVANCED) 2. Stomach, distal, --- Adenocarcinoma, moderately differentiated (pT1bNO) (EARLY) (Synchronous cancer)	Human	秀傳醫療社團法人秀傳紀念醫院
487	70	Angiomyolipoma of the liver	Human	衛生福利部臺中醫院病理科
490	71	Xp11.2 translocation renal cell carcinoma	Human	羅東博愛醫院病理科
491	71	Anaplastic renal cell carcinoma	Djungarian hamster	國立中興大學獸醫病理生物學研究所
493	71	Mucin-producing urothelial-type adenocarcinoma of the prostate (MPUAP)	Human	天主教耕莘醫療財團法人耕莘醫院
494	71	Left paratesticular dedifferentiated liposarcoma with leiomyomatous differentiation.	Human	天主教耕莘醫療財團法人耕莘醫院
495	71	Renal nephroblastoma, blastema-predominant with metastasis to gingiva, renal mass	Dog	國立台灣大學獸醫專業學院分子暨比較病理生物學研究所
496	71	Testis, left: Malignant mixed germ cell–sex cord stromal tumor (spermatocytic germinoma and Sertoli cell tumor), with angiolymphatic invasion. Testis, right: Germ cell atrophy, multifocal, moderate.	Dog	長青動物醫院
499	72	Brain, frontal lobe, Lt., Malignant melanoma, consistent with metastatic cutaneous malignant melanoma.	Human	國軍桃園總醫院

	501	72	Anaplastic carcinoma thyroid (spindle cell type)	Human	天主教耕莘醫院
	502	72	Primitive neuroectodermal tumor (PNET), most likely originating from ureter, with metastasis to liver and involvements of urinary bladder, uterus and left adrenal gland	Formosan serow	臺灣大學獸醫學系
	503	72	Metastatic follicular carcinoma	Human	衛生福利部台中醫院
	506	73	Type B1 thymoma	Human	天主教耕莘醫院
	508	73	Metastatic melanoma	Human	秀傳醫療社團法人秀傳紀念醫院
細菌		1	Tuberculosis	Monkey	臺灣大學獸醫學系
	7.	1	Tuberculosis	Human	省立新竹醫院
	12.	2	H. pylori-induced gastritis	Human	台北病理中心
	13.	2	Pseudomembranous colitis	Human	省立新竹醫院
	26.	3	Swine salmonellosis	Pig	中興大學獸醫學系
	27.	3	Vegetative valvular endocarditis	Pig	台灣養豬科學研究所
	28.	4	Nocardiosis	Human	台灣省立新竹醫院
	29.	4	Nocardiosis	Largemouth bass	屏東縣家畜疾病防治所
	32.	4	Actinomycosis	Human	台灣省立豐原醫院
	33.	4	Tuberculosis	Human	苗栗頭份為恭紀念醫院
	53.	7	Intracavitary aspergilloma and cavitary tuberculosis, lung.	Human	羅東聖母醫院
	54.	7	Fibrocalcified pulmonary TB, left Apex. Mixed actinomycosis and aspergillosis lung infection with abscess DM, NIDDM.	Human	林口長庚紀念醫院
	58.	7	Tuberculous enteritis with perforation	Human	佛教慈濟綜合醫院
	61.	8	Spirochetosis	Goose	國立嘉義農專獸醫科
	63.	8	Proliferative enteritis (Lawsonia intracellularis infection)	Porcine	屏東縣家畜疾病防治所
	68.	9	Liver abscess (Klebsillae pneumoniae)	Human	台北醫學院
		10	Xanthogranulomatous inflammation with nephrolithiasis, kidney, right. Ureteral stone, right.	Human	羅東聖母醫院
		10	Emphysematous pyelonephritis	Human	彰化基督教醫院
	89.	10	Severe visceral gout due to kidney damaged Infectious serositis	Goose	中興大學獸醫學系

		13	Listeric encephalitis	Lamb	屏東縣家畜疾病防治所
		13	Tuberculous meningitis	Human	羅東聖母醫院
		16	Swine salmonellosis with meningitis	Swine	中興大學獸醫學系
		16	Meningoencephalitis, fibrinopurulent and lymphocytic, diffuse, subacute, moderate, cerebrum, cerebellum and brain stem, caused by Streptococcus spp. infection	Swine	國家實驗動物繁殖及研究中心
		17	Coliform septicemia of newborn calf	Calf	屏東縣家畜疾病防治所
		20	Porcine polyserositis and arthritis（Glasser's disease）	Pig	中興大學獸醫學院
		20	Mycotic aneurysm of jejunal artery secondary to infective endocarditis	Human	慈濟醫院病理科
		21	Chronic nephritis caused by Leptospira spp	Pig	中興大學獸醫學院
		21	Ureteropyelitis and cystitis	Pig	中國化學製藥公司
		36	Pulmonary actinomycosis.	Human	耕莘醫院病理科
		37	Tuberculous peritonitis	Human	彰化基督教醫院病理科
		38	Septicemic salmonellosis	Piglet	屏東科技大學獸醫系
		38	Leptospirosis	Human	慈濟醫院病理科
		39	Mycobacteriosis	Soft turtles	屏東科技大學獸醫系
		42	Staphylococcus spp. infection	Formosa Macaque	中興大學獸醫病理學研究所
		42	Leptospirosis	Dog	台灣大學獸醫學系
		43	Leptospirosis	Human	花蓮慈濟醫院
		43	Cryptococcus and Tuberculosis	Human	彰濱秀傳紀念醫院
	319	46	Placentitis, Coxiella burnetii	Goat	台灣動物科技研究所
	321	46	Pneumonia, Buirkholderia pseudomallei	Goat	屏東縣家畜疾病防治所
細菌	339	48	Mycoplasmosis	Rat	國家實驗動物中心
	352	50	Chromobacterium violaceum Septicemia	Gibbon	Bogor Agricultural University, Indonesia
	353	50	Salmonellosis	Pig	國立中興大學獸醫學院
	367	52	Melioidosis (Burkholderia pseudomallei), lung	Human	花蓮慈濟醫院
	370	52	Suppurative bronchopneumonia (Bordetellae trematum) with Trichosomoides crassicauda infestation	Rat	國立中興大學獸醫學院
	374	53	Pulmonary coccidiodomycosis	Human	彰化基督教醫院

	375	53	Paratuberculosis in Macaca cyclopis	Macaca cyclopis	國立屏東科技大學獸醫學院
	379	53	Bovine Johne's disease (BJD) or paratuberculosis of cattle	Dairy cow	屏東縣家畜疾病防治所
	380	53	NTB, Mycobacterium abscessus	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	382	54	Leptospirosis	Pig	國立屏東科技大學獸醫學院
	384	54	Neisseria Infected Pneumonitis	Cat	中興大學獸醫學系
	385	54	Mycobacteria avian complex dacryocyctitis	Human	花蓮佛教慈濟綜合醫院
	387	54	Swine Erysipelas	Pig	屏東縣家畜疾病防治所
	396	56	Suppurative meningitis caused by Streptococcus spp in pigs	Pig	國立中興大學獸醫病理生物學研究所
	399	56	Listeric encephalitis in dairy goats	Goat	屏東縣家畜疾病防治所
	435	63	Tuberculosis	Human	花蓮佛教慈濟綜合醫院
	438	63	Porcine proliferative enteritis (PPE)	Pig	國立中興大學獸醫病理生物學研究所
	446	64	Actinomycosis (lumpy jaw) in a dairy cattle	Cattle	國立中興大學獸醫病理生物學研究所
	450	65	Mycobacterium avium infection	Human	花蓮佛教慈濟綜合醫院
	464	67	Ulcerative actinomycotic squamous plaque with focal (basal) severe dysplasia, mucosa, gingivobuccal junction, right lower gingiva in a man	Human	嘉義聖馬爾定醫院
	469	68	Scrub typhus	Human	佛教慈濟綜合醫院暨慈濟大學
	489	71	Malakoplakia due to Escherichia coli infection, left testis	Human	佛教慈濟綜合醫院暨慈濟大學
	492	71	Cystitis, bilateral ureteritis and pyelonephritis, hemorrhagic, necrotic, purulent, severe, diffuse, chronic progressive, urinary bladder, ureters and kidneys	Dog	國立中興大學獸醫病理生物學研究所
病毒	21.	3	Newcastle disease	Chicken	台灣大學獸醫學系
	22.	3	Herpesvirus infection	Goldfish	台灣大學獸醫學系
	30.	4	Demyelinating canine distemper encephalitis	Dog	台灣養豬科學研究所
	31.	4	Adenovirus infection	Malayan sun bears	台灣大學獸醫學系
	50.	7	Porcine cytomegalovirus infection	Piglet	台灣省家畜衛生試驗所
	55.	7	Infectious laryngo-tracheitis (Herpesvirus infection)	Broilers	國立屏東技術學院獸醫學系

	69.	9	Pseudorabies (Herpesvirus infection)	Pig	台灣養豬科學研究所
	78.	10	Marek's disease in native chicken	Chicken	屏東縣家畜疾病防治所
	92.	11	Foot- and- mouth disease (FMD)	Pig	屏東縣家畜疾病防治所
	101.	11	Swine pox	Pig	屏東科技大學獸醫學系
		13	Pseduorabies	Piglet	國立屏東科技大學
		13	Avian encephalomyelitis	Chicken	國立中興大學
		15	Contagious pustular dermatitis	Goat	屏東縣&台東縣家畜疾病防治所
		15	Fowl pox and Marek's disease	Chicken	中興大學獸醫學系
		16	Japanese encephalitis	Human	花蓮佛教慈濟綜合醫院
		17	Viral encephalitis, polymavirus infection	Lory	美國紐約動物醫學中心
		17	1. Aspergillus spp. encephalitis and myocarditis 2. Demyelinating canine distemper encephalitis	Dog	台灣大學獸醫學系
		19	Enterovirus 71 infection	Human	彰化基督教醫院
		19	Ebola virus infection	African Green monkey	行政院國家科學委員會實驗動物中心
		19	Rabies	Longhorn Steer	台灣大學獸醫學系
		20	Parvoviral myocarditis	Goose	屏東科技大學獸醫學系
		28	SARS	Human	台大醫院病理科
		28	TGE virus	swine	臺灣動物科技研究所
		28	Feline infectious peritonitis(FIP)	Feline	台灣大學獸醫學系
		30	Chicken Infectious Anemia (CIA)	Layer	屏東防治所
病毒	219	31	1. Lymph node:Lymphdenitis, with lymphocytic depletion and intrahistiocytic basophilic cytoplasmic inclusion bodies. Etiology consistent with Porcine Circovirus (PCV)infection. 2. Lung: Bronchointerstitial pneumonia, moderate, lymphoplasmacytic, subacute.	Pig	臺灣動物科技研究所
	220	31	Cytomegalovirus colitis	Human	彰化基督教醫院病理科
	221	31	Canine distemper virus Canine adenovirus type ll co-infection	Canine	國家實驗動物繁殖及研究中心
	223	32	1. Skin, mucocutaneous junction (lip): Cheilitis, subacute, diffuse, sever, with epidermal pustules, ballooning degeneration, proliferation, and eosinophilic	Goat	台灣動物科技研究所

			intracytoplasmic inclusion bodies, Saanen goat. 2. Haired skin: Dermatitis, proliferative, lymphoplasmacytic, subacute, diffuse, sever, with marked epidermal pustules, ballooning degeneration, acanthosis, hyperkeratosis, and eosinophilic intracytoplasmic inclusion bodies.		
	238	35	Hydranencephaly	Cattle	國立屏東科技大學獸醫學系
	248	36	Porcine Cytomegalovirus (PCMV) infection	Swine	國立屏東科技大學獸醫學系
	250	36	Porcine respiratory disease complex (PRDC) and polyserositis, caused by co-infection with pseudorabies (PR) virus, porcine circovirus type 2 (PCV 2), porcine reproductive and respiratory syndrome (PRRS) virus and Salmonella typhimurium.	Swine	屏東縣家畜疾病防所
病毒	255	37	Vaccine-induced canine distemper	gray foxes	國立台灣大學獸醫學系
	265	39	Bronchointerstitial pneumonia (PCV II infection)	Swine	台灣大學獸醫學系
	295	42	Feline infectious peritonitis (FIP)	Cat	中興大學獸醫病理所
	362	51	Canine distemper virus infection combined pulmonary dirofilariasis	Dog	國家實驗研究院
	381	54	Polyomavirus infection of urinary tract	Human	羅東博愛醫院
	405	57	Porcine circovirus-associated lymphadenitis	Swine	國立屏東科技大學 獸醫教學醫院病理科
	414	59	Rabies virus infection	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	415	59	Canine distemper virus infection	Dog	台灣大學獸醫專業學院分子暨比較病理生物學研究所
	420	60	Respiratory syncytial virus infection	Human	佛教慈濟綜合醫院暨慈濟大學病理科
	421	60	Porcine epidemic diarrhea (PED)	Piglet	國立中興大學獸醫病理生物學研究所
	455	66	Goose Haemorrhagic Polyomaviruses (GHPV)	Goose	農委會家畜衛生試驗所

	456	66	HPV associated small cell neuroendocrine carcinoma of uterine cervix	Human	羅東博愛醫院病理科
	458	66	Roventricular dilatation disease (PDD)	Cacatuini	國立中興大學獸醫病理生物學研究所
	468	68	Avian poxvirus	Eagle	國立中興大學獸醫病理生物學研究所
	472	68	Suspected viral infection with secondary aspergillosis	Parrot	國立中興大學獸醫病理生物學研究所
	510	73	Porcine reproductive and respiratory syndrome (PRRS)	pig	國立中興大學獸醫病理生物學研究所
黴菌	23.	3	Chromomycosis	Human	台北病理中心
黴菌	47.	7	Lung: metastatic carcinoma associated with cryptococcal infection. Liver: metastatic carcinoma. Adrenal gland, right: carcinoma (primary)	Human	三軍總醫院
黴菌	48.	7	Adiaspiromycosis	Wild rodents	台灣大學獸醫學系
黴菌	52.	7	Aspergillosis	Goslings	屏東縣家畜疾病防治所
黴菌	53.	7	Intracavitary aspergilloma and cavitary tuberculosis, lung.	Human	羅東聖母醫院
黴菌	54.	7	Fibrocalcified pulmonary TB, left Apex. Mixed actinomycosis and aspergillosis lung infection with abscess DM, NIDDM.	Human	林口長庚紀念醫院
黴菌	105.	13	Mucormycosis Diabetes mellitus	Human	花蓮佛教慈濟綜合醫院
黴菌		15	Eumycotic mycetoma	Human	花蓮佛教慈濟綜合醫院
黴菌		17	1. Aspergillus spp. encephalitis and myocarditis 2. Demyelinating canine distemper encephalitis	Dog	台灣大學獸醫學系
黴菌		43	Systemic Candidiasis	Tortoise	中興大學獸醫學院
黴菌		45	Alfatoxicosis in dogs	Canine	國立臺灣大學獸醫專業學院
黴菌	322	46	Allergic fungal sinusitis	Human	羅東博愛醫院
黴菌	326	46	Meningoencephalitis, Aspergillus flavus	Cat	國立臺灣大學獸醫專業學院
黴菌	331	47	Histoplasmosis	Human	花蓮慈濟醫院病理科
黴菌	332	47	Pulmonary Blastomycosis	Rat	中興大學獸醫學院
黴菌	355	50	Encephalitozoonosis	Rabbit	國立中興大學獸醫學院
黴菌	356	50	Eosinophilic granuloma with fungal infection, Skin	Cat	國立臺灣大學獸醫專業學院
黴菌	386	54	Dermatophytic pseudomycetoma	Cat	台灣動物科技研究所

	395	56	Systemic Cryptococcus neoformans infection in a Golden Retriever	Dog	國立台灣大學分子暨比較病理生物學研究所
	441	63	Protothecosis	Dog	國家實驗動物繁殖及研究中心
	449	65	Porcine epidemic diarrhea (PED)	Piglet	國立台灣大學分子暨比較病理生物學研究所
寄生蟲	14.	2	Dirofilariasis	Dog	台灣省家畜衛生試驗所
	15.	2	Pulmonary dirofilariasis	Human	台北榮民總醫院
	20.	3	Sparganosis	Human	台北榮民總醫院
	46.	7	Feline dirofilariasis	Cat	美國紐約動物醫學中心
	49.	7	Echinococcosis	Human	台北榮民總醫院
	60.	8	Intestinal capillariasis	Human	台北馬偕醫院
	64.	8	Adenocarcinoma of sigmoid colon Old schistosomiasis of rectum	Human	省立新竹醫院
	66.	8	Echinococcosis	Chapman's zebra	台灣大學獸醫學系
	67.	9	Hepatic ascariasis and cholelithiasis	Human	彰化基督教醫院
		13	Parasitic meningoencephalitis, caused by Toxocara canis larvae migration	Dog	臺灣養豬科學研究所
		17	Disseminated strongyloidiasis	Human	花蓮佛教慈濟綜合醫院
		17	Eosinophilic meningitis caused by Angiostrongylus cantonensis	Human	台北榮民總醫院 病理檢驗部
	156	19	Parastrongylus cantonensis infection	Formosan gem-faced civet	中興大學獸醫學院
		19	Capillaria hepatica, Angiostongylus cantonensis	Norway Rat	行政院農業委員會 農業藥物毒物試驗所
		29	Colnorchiasis	Human	高雄醫學院附設醫院
		29	Trichuriasis	Human	彰化基督教醫院
寄生蟲		29	Psoroptes cuniculi infection (Ear mite)	Rabbit	農業藥物毒物試驗所
		29	Pulmonary dirofilariasis	Human	和信治癌中心醫院
		29	Capillaries philippinesis	Human	和信治癌中心醫院
		29	Adenocarcinoma with schistosomiasis	Human	花蓮佛教慈濟綜合醫院
		41	Etiology- consistent with Spironucleus (Hexamita) muris	Rat	國家實驗動物繁殖及研究中心
	327	46	Dermatitis, mange infestation	Serow	中興大學獸醫學院
寄生蟲	328	46	Trichosomoides crassicauda, urinary bladder	Rat	國家實驗動物中心
	362	51	Canine distemper virus infection combined pulmonary dirofilariasis	Dog	國家實驗研究院

	370	52	Suppurative bronchopneumonia (Bordetellae trematum) with Trichosomoides crassicauda infestation	Rat	國立中興大學獸醫學院
	416	59	Toxoplasmosis in a finless porpoise	Finless porpoise	國立屏東科技大學獸醫教學醫院病理科
		63	Liver milk spots in pig	Pig	中興大學獸醫病理生物學研究所
	453	66	Liver fluke infection	Buffalo	中興大學獸醫病理生物學研究所
	471	68	Haemosporidian parasite infection	pigeon	國立台灣大學分子暨比較病理生物學研究所
原蟲	4.	1	Cryptosporidiosis	Goat	台灣養豬科學研究所
	15.	2	Amoebiasis	Lemur fulvus	台灣養豬科學研究所
	16.	2	Toxoplasmosis	Squirrel	台灣養豬科學研究所
	17.	2	Toxoplasmosis	Pig	屏東技術學院 獸醫學系
	51.	7	Pneumocystis carinii pneumonia	Human	台北病理中心
	57.	8	Cecal coccidiosis	Chicken	中興大學獸醫學系
	65.	8	Cryptosporidiosis	Carprine	台灣養豬科學研究所
	211	30	Avian malaria, African black-footed penguin	Avian	臺灣動物科技研究所
	242	35	Neosporosis	Cow	國立屏東科技大學 獸醫學系
	263	38	Intestinal amebiasis	Human	彰化基督教醫院病理科
	320	46	Cutaneous leishmaniasis	Human	佛教慈濟綜合醫院
	325	46	Myocarditis/encephalitis, Toxoplasma gondii	Wallaby	國立臺灣大學獸醫專業學院
	443	65	Brain toxoplasmosis in a man	Human	佛教慈濟綜合醫院病理科
	462	67	Toxoplasmosis	Human	佛教慈濟綜合醫院病理科
	470	68	Leucocytozoonosis	chickens	中興大學獸醫病理生物學研究所
立克次體	229	32	Necrotizing inflammation due to scrub typhus	Human	佛教慈濟醫院病理科
	251	36	Scrub typhus with diffuse alveolar damage in bilateral lungs.	Human	佛教慈濟醫院病理科
皮膚	216	30	Cytophagic histiocytic panniculitis with terminal hemophagocytic syndrome	Human	佛教慈濟綜合醫院病理科
	359	51	Eosinophilic granuloma with fungal infection, Skin	Cat	國立臺灣大學獸醫專業學院

	360	51	Septa panniculitis with lymphocytic vasculitis	Human	慈濟綜合醫院暨慈濟大學
其它	9.	2	Perinephric pseudocyst	Cat	台灣大學獸醫學系
	10.	2	Choledochocyst	Human	長庚紀念醫院
	11.	2	Bile duct ligation	Rat	中興大學獸醫學系
	37.	4	Myositis ossificans	Human	台北醫學院
	75.	9	Acute yellow phosphorus intoxication	Rabbits	中興大學獸醫學系
	76.	10	Polycystic kidney bilateral and renal failure	Cat	美國紐約動物醫學中心
	80.	10	Glomerular sclerosis and hyalinosis, segmental, focal, chronic, moderate Benign hypertension	SHR rat	國防醫學院 & 國家實驗動物繁殖及研究中心
	83.	10	Phagolysosome-overload nephropathy	SD rats	國家實驗動物繁殖及中心
	85.	10	Renal amyloidosis	Dog	台灣養豬科學研究所
	89.	10	Severe visceral gout due to kidney damaged infectious serositis	Goose	中興大學獸醫學系
	91.	10	Hypervitaminosis D	Orange-rumped agoutis	台灣大學獸醫學系
		14	Cystic endometrical hyperplasia	Dog	臺灣養豬科學研究所
		14	Cystic subsurface epithelial structure (SES)	Dog	國科會實驗動物中心
		15	Superficial necrolytic dermatitis	Dog	美國紐約動物醫學中心
		15	Solitary congenital self-healing histiocytosis	Human	羅東博愛醫院
		15	Alopecia areata	Mouse	國家實驗動物繁殖及研究中心
		17	Avian encephalomalacia (Vitamin E deficiency)	Chicken	國立屏東科技大學獸醫學系
	151	18	Osteodystrophia fibrosa	Goat	台灣養豬科學研究所&台東縣家畜疾病防治所
		20	Hypertrophic cardiomyopathy	Pig	台灣大學獸醫學系
其它		21	Chinese herb nephropathy	Human	三軍總醫院病理部及腎臟科
		21	Acute pancreatitis with rhabdomyolysis	Human	慈濟醫院病理科
		21	Malakoplakia	Human	彰化基督教醫院
		25	Darier’s disease	Human	高雄醫學大學病理科
	191	27	1. Polyarteritis nodosa 2. Hypertrophic Cardiomyopathy	Feline	台灣大學獸醫學系
	193	27	Norepinephrin cardiotoxicity	Cat	台中榮總
	196	27	Cardiomyopathy (Experimental)	Mice	綠色四季

	212	30	Kikuchi disease (histiocytic necrotizing lymphandenitis)	Lymphandenitis	耕莘醫院病理科
	225	32	Calcinosis circumscripta, soft tissue of the right thigh, dog	Dog	台灣大學獸醫所
	230	34	Hemochromatosis, liver, bird	Bird	台灣大學獸醫學系
	234	34	Congenital hyperplastic goiter	Holstein calves	屏東縣家畜疾病防治所
	236	34	Hepatic lipidosis (fatty liver)	Rats	中興大學獸醫學病理學研究所
	237	35	Arteriovenous malformation (AVM) of cerebrum	Human	耕莘醫院病理科
	244	35	Organophosphate induced delayed neurotoxicity in hens	Hens	中興大學獸醫學病理學研究所
	257	37	Severe lung fibrosis after chemotherapy in a child with Ataxia- Telangiectasia	Human	慈濟醫院病理科
	294	42	Arteriovenous malformation of the left hindlimb	Dog	台灣大學獸醫學系
	299	43	Polioencephalomalacia	Goat kid	屏東家畜疾病防治所
	310	44	Hyperplastic goiter	Piglet	屏東家畜疾病防治所
	311	44	Melamine and cyanuric acid contaminated pet food induced nephrotoxicity	Rat	中興大學獸醫學病理學研究所
	318	45	Alfatoxicosis	Canine	國立臺灣大學獸醫專業學院
	333	47	Lordosis, C6 to C11	Penguin	國立臺灣大學獸醫專業學院
	341	49	Pulmonary placental transmogrification	Human	羅東博愛醫院
	345	49	Acute carbofuran intoxication	Jacana	國立中興大學獸醫學院
	350	50	Malakoplakia, liver	Human	慈濟綜合醫院暨慈濟大學
	351	50	Eosionphilic granuloma, Right suboccipital epidural mass	Human	羅東博愛醫院病理科
	359	51	Eosinophilic granuloma with fungal infection, Skin	Cat	國立臺灣大學獸醫專業學院
	360	51	Septa panniculitis with lymphocytic vasculitis	Human	慈濟綜合醫院暨慈濟大學
	361	51	Hepatotoxicity of SMA-AgNPs	Mouse	國立中興大學獸醫病理生物學研究所
	363	51	Hypertrophy osteopathy	Cat	國立臺灣大學獸醫專業學院
其他	372	52	Snake bite suspected, skin and spleen	Monkey (red guenon)	國立臺灣大學獸醫專業學院
	383	54	Langerhans cell histiocytosis	Human	聖馬爾定醫院病理科

388	54	Canine protothecosis	Dog	國立臺灣大學獸醫專業學院
392	55	Lithium nephrotoxicity	Human	佛教慈濟綜合醫院暨慈濟大學病理科
398	56	Gamma-knife-radiosurgery-related demyelination	Human	佛教慈濟綜合醫院暨慈濟大學病理科
400	56	Canine Disseminated form Granulomatous Meningoencephalitis (GME)	Dog	國立屏東科技大學獸醫教學醫院病理科
419	60	Mucopolysaccharidosis	Cat	國立中興大學獸醫病理生物學研究所
426	61	Phleboliths in a man	Human	台北醫學大學附設醫院口腔外科口腔病理科
427	61	Visceral gout in a Green iguana (Iguana iguana)	Iguana	中興大學獸醫病理生物學研究所
431	62	pulmonary alveolar proteinosis in a man	Human	羅東博愛醫院病理科
432	62	Congenital pulmonary airways malformation, type 2 in a women	Human	高雄醫學大學附設醫院
437	63	Large solitary luteinized follicular cyst of pregnancy and puerperium	Human	羅東博愛醫院病理科
454	66	Eosinophilic granuloma	Human	佛教慈濟綜合醫院暨慈濟大學病理科
461	67	Intestinal emphysema	Pig	中興大學獸醫病理生物學研究所
466	67	Nodular goiter	Human	彰化秀傳醫院病理科
474	68	Parastrongyliaisis (Previously called Angiostrongyliasis)	squirrel	中興大學獸醫病理生物學研究所
475	69	Bronchogenic cyst	Dog	國立臺灣大學獸醫專業學院
480	69	Toxic pneumonitis caused by inhalation of waterproofing spray	Dog	中興大學獸醫學病理學研究所
486	70	IgG4-related sclerosing cholangitis (ISC)	Human	天主教耕莘醫療財團法人耕莘醫院
488	70	Crohn's disease	Human	彰化基督教醫院病理部
Gross	64	Hydronephrosis	Pig	中興大學獸醫病理生物學研究所
Gross	65	1. Traumatic pericarditis, severe, chronic progressive, diffuse, heart. 2. Hardware disease	Cattle	中興大學獸醫病理生物學研究所
497	72	Combined central and peripheral demyelination (CCPD)	Dog	國立臺灣大學獸醫專業學院
498	72	Inflammatory demyelinating pseudotumour	Human	佛教慈濟綜合醫院暨慈濟大學病理科

500	72	Ischemic stroke in a dog	Dog	中興大學獸醫病理生物學研究所
504	73	Autoimmune pancreatitis (IgG4 related pancreatitis)	Human	羅東博愛醫院病理科
505	73	Thrombotic microangiopathy with hemorrhagic infarct of brain, acute myocardial ischemia and acute kidney injury	Human	佛教慈濟綜合醫院暨慈濟大學病理科
507	73	The most likely diagnosis is erythema multiforme (EM).	Dog	國立臺灣大學獸醫專業學院
509	73	Doxorubicin-induced diseases	Chicken	中興大學獸醫病理生物學研究所

會 員 資 料 更 新 服 務

各位會員：

您好！如果您的會員資料有更新或誤刊情形，麻煩您填妥表格後寄回學會秘書處或電話連絡：

中華民國比較病理學會秘書處

張惠雯 助理教授
cscptaiwan@gmail.com
02-33661296
106 台北市羅斯福路四段一號 國立台灣大學 獸醫專業學院

----------中華民國比較病理學會----------

會員資料更改卡

姓　　名：_____　　會員類別：☐一般會員
☐學生會員
☐贊助會員

最高學歷：_____

服務單位：_____職　　稱：_____

永久地址：_____

通訊地址：_____

電　　話：_____傳　　真：_____

E-Mail Address：_____

中 華 民 國 比 較 病 理 學 會

誠摯邀請您加入

入　會　辦　法

一、 本會會員申請資格為：

（一）一般會員：贊同本會宗旨，年滿二十歲，具有國內外大專院校（或同等學歷）生命科學及其它相關科系畢業資格或高職畢業從事生命科學相關工作滿兩年者。

（二）學生會員：贊同本會宗旨，在國內、外大專院校生命科學或其他相關科系肄業者（請檢附學生身份證明）。

（三）贊助會員：贊助本會工作之團體或個人。

（四）榮譽會員：凡對比較病理學術或會務之推廣有特殊貢獻，經理事會提名並經會員大會通過者。

二、 會員：

（一）入 會 費：一般會員新台幣壹仟元，學生會員壹佰元，贊助會員伍仟元，於入會時繳納。

（二）常年會費：一般會員新台幣壹仟元，學生會員壹佰元。

【註：學生會員身份變更為一般會員時，只需繳交一般會員之常年會費】

三、入會費及常年會費繳交方式：以銀行轉帳或匯款（**006 合作金庫銀行、帳號：0190-717-052017、戶名：中華民國比較病理學會**）；並請填妥**入會申請表**連同**銀行轉帳交易明細表**或**匯款單**以郵寄或傳真方式寄回中華民國比較病理學會秘書處 張惠雯老師收。地址：106 台北市羅斯福路四段一號 國立台灣大學 獸醫專業學院

電話：02-33661296

中華民國比較病理學會入會申請及會員卡

會電腦編號

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<tr><td rowspan="2">姓名</td><td>中文</td><td></td><td rowspan="2">姓別</td><td rowspan="2">□ 男
□ 女</td><td>出生</td><td>民國　年　月　日</td><td rowspan="2">出生地</td><td rowspan="2"></td></tr>
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中華民國比較病理學會
申請人　　簽章
介紹人　　簽章
介紹人　　簽章
中華民國　　年　　月　　日</td><td colspan="2">審核結果</td></tr>
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